WATER QUALITY CONTROL PLAN

OCEAN WATERS OF CALIFORNIA

CALIFORNIA OCEAN PLAN

1990

STATE WATER RESOURCES CONTROL BOARD

State of California

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OCEAN WATERS OF CALIFORNIA

Adopted and Effective

March 22, 1990

STATE WATER RESOURCES CONTROL BOARD
RESOLUTION NO. 90-27

APPROVAL OF AMENDMENT TO THE
WATER QUALITY CONTROL PLAN FOR OCEAN WATERS OF CALIFORNIA
(CALIFORNIA OCEAN PLAN)

WHEREAS:

1. The State Water Resources Control (State Board) adopted the Ocean Plan on July 6, 1972 and revised the plan in 1978, 1983, and 1988.

2. The State Board may adopt water quality control plans for waters for which water quality standards are required by the Federal Clean Water Act in accordance with California Water Code Section 13170.

3. The State Board is responsible for reviewing Ocean Plan water quality standards and for modifying and adopting standards in accordance with Section 303(c)(1) of the Federal Clean Water Act and Section 13170.2(b) of the California Water Code.

4. The State Board has considered relevant management agency agreements in accordance with Section 13170.1 of the California Water Code.

5. Additional information pertinent to water quality objectives for dioxin and related compounds is being developed and reviewed by the scientific community.

6. The State Board prepared and circulated a draft Function Equivalent Document in accordance with the provisions of the California Environmental Quality Act and Title 14, California Code of Regulations 15251(g).

7. The State Board conducted a public hearing in Torrance on August 29, 1989 to solicit comments regarding the proposed amendments of the Ocean Plan and has reviewed and considered carefully all comments and testimony received. The State Board considered the information contained in the Functional Equivalent Document prior to approval of the California Ocean Plan.

8. The California Ocean Plan as approved will not have a significant adverse effect on the environment.

THEREFORE BE IT RESOLVED:

1. That the State Board approves the Functional Equivalent Document for the amendment of the Water Quality Control Plan for Ocean Waters of California.

2. That the State Board hereby adopts amendments to the California Ocean Plan (attached).

3. That the State Board authorizes the Executive Director, or his designee, to transmit the Plan to the U.S. Environmental Protection Agency, Region 9 in compliance with Section 303(c)(1) of the Clean Water Act.

4. That the State Board directs its staff to review the water quality objective for dioxin and related compounds as soon as possible within the next triennial review period.

5. That the State Board declares its intent to require continual monitoring of the marine environment to assure that the Plan reflects the latest available data and that the water quality objectives are adequate to fully protect indigenous marine species and to protect human health.

CERTIFICATION

The undersigned Administrative Assistant to the Board, does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Resources Control Board held on March 22, 1990.

Maureen Marche'
Administrative Assistant to the Board

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CALIFORNIA OCEAN PLAN

WATER QUALITY CONTROL PLAN FOR OCEAN WATERS OF CALIFORNIA

INTRODUCTION

In furtherance of legislative policy set forth in Section 13000 of Division 7 of the California Water Code (Stats. 1969, Chap. 482) pursuant to the authority contained in Section 13170 and 13170.2 (Stats. 1971, Chap. 1288) the State Water Resources Control Board hereby finds and declares that protection of the quality of the ocean* waters for use and enjoyment by the people of the State requires control of the discharge of waste* to ocean* waters in accordance with the provisions contained herein. The Board finds further that this plan shall be reviewed at least every three years to guarantee that the current standards are adequate and are not allowing degradation* to marine species or posing a threat to public health.

This plan is applicable, it its entirety, to point source discharges to the ocean*. Nonpoint sources of waste* discharges to the ocean* are subject to Chapter I Beneficial Uses, Chapter II - Water Quality Objectives, Chapter III -General Requirements, Chapter IV - Table B (wherein compliance with water quality objectives shall, in all cases, be determined by direct measurements in the receiving waters) and Chapter V - Discharge Prohibitions.

This plan is not applicable to discharges to enclosed* bays and estuaries* or inland waters nor is it applicable to vessel wastes, or the control of dredging spoil.

Provisions regulating the thermal aspects of waste* discharged to the ocean* are set forth in the Water Quality Control Plan for the Control of Temperature in the Coastal and Interstate Waters and Enclosed* Bays and Estuaries* of California.

Chapter I
BENEFICIAL USES

The beneficial uses of the ocean* waters of the State that shall be protected include industrial water supply, water contact and non-contact recreation, including aesthetic enjoyment, navigation, commercial and sport fishing, mariculture*, preservation and enhancement of Areas of Special Biological Significance, rare and endangered species, marine habitat, fish migration, fish spawning and shellfish* harvesting.

Chapter II
WATER QUALITY OBJECTIVES

This chapter sets forth limits or levels of water quality characteristics for ocean* waters to ensure the reasonable protection of beneficial uses and the prevention of nuisance. The discharge of waste* shall not cause violation of these objectives.

The Water Quality Objectives and Effluent Quality Requirements are defined by a statistical distribution when appropriate. This method recognizes the normally occurring variations in treatment efficiency and sampling and analytical techniques and does not condone poor operating practices.

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* See Appendix I for definition of terms.

Compliance with the water quality objectives of this chapter shall be determined from samples collected at stations representative of the area within the waste field where initial* dilution is completed.

A. Bacterial Characteristics

1. Water-Contact Standards

Within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and in areas outside this zone used for water contact sports, as determined by the Regional Board, but including all kelp* beds, the following bacterial objectives shall be maintained throughout the water column:

a. Samples of water from each sampling station shall have a density of total coliform organisms less than 1,000 per 100 ml (10 per ml); provided that not more than 20 percent of the samples at any sampling station, in any 30-day period, may exceed 1,000 per 100 ml (10 per ml), and provided further that no single sample when verified by a repeat sample taken within 48 hours shall exceed 10,000 per 100 ml (100 per ml).

b. The fecal coliform density based on a minimum of not less than five samples for any 30-day period, shall not exceed a geometric mean of 200 per 100 ml nor shall more than 10 percent of the total samples during any 60-day period exceed 400 per 100 ml.

The "Initial* Dilution Zone" of wastewater outfalls shall be excluded from designation as "kelp* beds" for purposes of bacterial standards, and Regional Boards should recommend extension of such exclusion zone where warranted to the State Board (for consideration under Chapter VI.F.). Adventitious assemblages of kelp plants on waste discharge structures (e.g., outfall pipes and diffusers) do not constitute kelp* beds for purposes of bacterial standards.

2. Shellfish* Harvesting Standards

At all areas where shellfish* may be harvested for human consumption, as determined by the Regional Board, the following bacterial objectives shall be maintained throughout the water column:

The median total coliform density shall not exceed 70 per 100 ml, and not more than 10 percent of the samples shall exceed 230 per 100 ml.

B. Bacterial Assessment and Remedial Action Requirements

The requirements listed below shall be used to 1) determine the occurrence and extent of any impairment of a beneficial use due to bacterial contamination; 2) generate information which can be used in the development of an enterococcus standard; and 3) provide the basis for remedial actions necessary to minimize or eliminate any impairment of a beneficial use.

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* See Appendix I for definition of terms.

Measurement of enterococcus density shall be conducted at all stations where measurement of total and fecal coliforms are required. In addition to the requirements of Section II.A.1., if a shore station consistently exceeds a coliform objective or exceeds a geometric mean enterococcus density of 24 organisms per 100 ml for a 30-day period or 12 organisms per 100 ml for a six-month period, the Regional Board shall require the appropriate agency to conduct a survey to determine if that agency's discharge is the source of the contamination. The geometric mean shall be a moving average based on no less than five samples per month, spaced evenly over the time interval. When a sanitary survey identifies a controllable source of indicator organisms associated with a discharge of sewage, the Regional Board shall take action to control the source.

Waste discharge requirements shall require the discharger to conduct sanitary surveys when so directed by the Regional Board. Waste discharge requirements shall contain provisiohs requiring the discharger to control any controllable discharges identified in a sanitary survey.

C. Physical Characteristics

1. Floating particulates and grease and oil shall not be visible.

2. The discharge of waste* shall not cause aesthetically undesirable discoloration of the ocean* surface.

3. Natural* light shall not be significantly* reduced at any point outside the initial* dilution zone as the result of the discharge of waste*.

4. The rate of deposition of inert solids and the characteristics of inert solids in ocean* sediments shall not be changed such that benthic communities are degraded*.

D. Chemical Characteristics

1. The dissolved oxygen concentration shall not at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste* materials.

2. The pH shall not be changed at any time more than 0.2 units from that which occurs naturally.

3. The dissolved sulfide concentration of waters in and near sediments shall not be significantly* increased above that present under natural conditions.

4. The concentration of substances set forth in Chapter IV, Table B, in marine sediments shall not be increased to levels which would degrade* indigenous biota.

5. The concentration of organic materials in marine sediments shall not be increased to levels which would degrade* marine life.

6. Nutrient materials shall not cause objectionable aquatic growths or degrade* indigenous biota.

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* See Appendix I for definition of terms.

E. Biological Characteristics

1. Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded*.

2. The natural taste, odor, and color of fish, shellfish*, or other marine resources used for human consumption shall not be altered.

3. The concentration of organic materials in fish, shellfish* or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health.

F. Radioactivity

1. Discharge of radioactive waste* shall not degrade* marine life.

Chapter III
GENERAL REQUIREMENTS FOR MANAGEMENT OF WASTE* DISCHARGE TO THE OCEAN*

A. Waste* management systems that discharge to the ocean* must be designed and operated in a manner that will maintain the indigenous marine life and a healthy and diverse marine community.

B. Waste discharged* to the ocean* must be essentially free of:

1. Material that is floatable or will become floatable upon discharge.

2. Settleable material or substances that may form sediments which will degrade* benthic communities or other aquatic life.

3. Substances which will accumulate to toxic levels in marine waters, sediments or biota.

4. Substances that significantly* decrease the natural* light to benthic communities and other marine life.

5. Materials that result in aesthetically undesirable discoloration of the ocean* surface.

C. Waste* effluents shall be discharged in a manner which provides sufficient initial* dilution to minimize the concentrations of substances not removed in the treatment.

D. Location of waste* discharges must be determined after a detailed assessment of the oceanographic characteristics and current patterns to assure that:

1. Pathogenic organisms and viruses are not present in areas where shellfish* are harvested for human consumption or in areas used for swimming or other body-contact sports.

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* See Appendix I for definition of terms.

2. Natural water quality conditions are not altered in areas designated as being of special biological significance or areas that existing marine laboratories use as a source of seawater.

3. Maximum protection is provided to the marine environment.

Waste* that contains pathogenic organisms or viruses should be discharged a sufficient distance from shellfishing* and water-contact sports areas to maintain applicable bacterial standards without disinfection. Where conditions are such that an adequate distance cannot be attained, reliable disinfection in conjunction with a reasonable separation of the discharge point from the area of use must be provided. Disinfection procedures that do not increase effluent toxicity and that constitute the least environmental and human hazard should be used.

Chapter IV
QUALITY REQUIREMENTS FOR WASTE* DISCHARGES (EFFLUENT QUALITY REQUIREMENTS)

This chapter sets forth the quality requirements for waste* discharge to the ocean*.

Table A limitations apply only to publicly owned treatment works and industrial discharges for which Effluent Limitations Guidelines have not been established pursuant to Sections 301, 302, 304, or 306 of the Federal Clean Water Act.

Table B limitations apply to all discharges within the jurisdiction of this plan.

Table A limitations, and effluent concentrations calculated from Table B limitations, shall apply to a discharger's total effluent, of whatever origin (i.e. gross, not net, discharge), except where otherwise specified in this Plan.

The State Board is authorized to administer and enforce effluent requirements established pursuant to the Federal Clean Water Act. Effluent limitations established under Sections 301, 302, 306, 307, 316, 403, and 405 of the aforementioned Federal Act and administrative procedures pertaining thereto, are included in this plan by reference. Compliance with Table A limitations, or Environmental Protection Agency Effluent Limitations Guidelines for industrial discharges, based on Best Practicable Control Technology, shall be the minimum level of treatment acceptable under this plan, and shall define reasonable treatment and waste control technology.

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* See Appendix I for definition of terms.

TABLE A
MAJOR WASTEWATER CONSTITUENTS AND PROPERTIES

	Unit of measurement	Limiting Concentrations: Monthly (30 day Average)	Weekly (7 day Average)	Maximum at any time
Grease and Oil	mg/l	25	40	75
Suspended Solids			see below+	
Settleable Solids	ml/l	1.0	1.5	3.0
Turbidity	NTU	75	100	225
pH	units		within limits of 6.0 to 9.0 at all times	
Acute* Toxicity	TUa	1.5	2.0	2.5

+Suspended Solids: Dischargers shall, as a 30-day average, remove 75% of suspended solids from the influent stream before discharging wastewaters to the ocean*, except that the effluent limitation to be met shall not be lower than 60 mg/l. Regional Boards may recommend that the State Board (Chapter VI.F.), with the concurrence of the Environmental Protection Agency, adjust the lower effluent concentration limit (the 60 mg/l above) to suit the environmental and effluent characteristics of the discharge. As a further consideration in making such recommendation for adjustment, Regional Boards should evaluate effects on existing and potential water* reclamation projects.

If the lower effluent concentration limit is adjusted, the discharger shall remove 75% of suspended solids from the influent stream at any time the influent concentration exceeds four times such adjusted effluent limit.

Effluent limitations shall be imposed in a manner prescribed by the State Board such that the concentrations set forth below as water quality objectives shall not be exceeded in the receiving water upon completion of initial* dilution, except that limitations indicated for radioactivity shall apply directly to the undiluted waste* effluent.

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* See Appendix I for definition of terms.

TABLE B
TOXIC MATERIALS LIMITATIONS

	Units of Measurement	Limiting Concentrations 6-Month Median	Daily Maximum	Instantaneous Maximum
OBJECTIVES FOR PROTECTION OF MARINE AQUATIC LIFE				
Arsenic	ug/l	8	32	80
Cadmium	ug/l	1	4	10
Chromium (Hexavalent) (see below, a)	ug/l	2	8	20
Copper	ug/l	3	12	30
Lead	ug/l	2	8	20
Mercury	ug/l	0.04	0.16	0.4
Nickel	ug/l	5	20	50
Selenium	ug/l	15	60	150
Silver	ug/l	0.7	2.8	7
Zinc	ug/l	20	80	200
Cyanide (see below, b)	ug/l	1	4	10
Total Chlorine Residual (For intermittent chlorine sources, see below, c)	ug/l	2	8	60
Ammonia (expressed as nitrogen)	ug/l	600	2400	6000
Chronic* Toxicity	TUc		1	
Phenolic Compounds (non-chlorinated)	ug/l	30	120	300
Chlorinated Phenolics	ug/l	1	4	10
Endosulfan	ng/l	9	18	27
Endrin	ng/l	2	4	6
HCH*	ng/l	4	8	12
Radioactivity	Not to exceed limits specified in Title 22, Chapter 15, Article 4, Section 64443 of the California Code of Regulations.			

* See Appendix I for definition of terms.

Table B Continued

Chemical	Units of Measurement	30-day Average
OBJECTIVES FOR PROTECTION OF HUMAN HEALTH -- NONCARCINOGENS		
acrolein	ug/l	220
antimony	mg/l	1.2
bis(2-chloroethoxy) methane	ug/l	4.4
bis(2-chloroisopropyl) ether	mg/l	1.2
chlorobenzene	ug/l	570
chromium (III)	mg/l	190
di-n-butyl phthalate	mg/l	3.5
dichlorobenzenes*	mg/l	5.1
1,1-dichloroethylene	mg/l	7.1
diethyl phthalate	mg/l	33
dimethyl phthalate	mg/l	820
4,6-dinitro-2-methylphenol	ug/l	220
2,4-dinitrophenol	ug/l	4.0
ethylbenzene	mg/l	4.1
fluoranthene	ug/l	15
hexachlorocyclopentadiene	ug/l	58
isophorone	mg/l	150
nitrobenzene	ug/l	4.9
thallium	ug/l	14
toluene	mg/l	85
1,1,2,2-tetrachloroethane	mg/l	1.2
tributyltin	ng/l	1.4
1,1,1-trichloroethane	mg/l	540
1,1,2-trichloroethane	mg/l	43
OBJECTIVES FOR PROTECTION OF HUMAN HEALTH -- CARCINOGENS		
acrylonitrile	ug/l	0.10
aldrin	ng/l	0.022
benzene	ug/l	5.9
benzidine	ng/l	0.069
beryllium	ng/l	33
bis(2-chloroethyl) ether	ug/l	0.045
bis(2-ethylhexyl) phthalate	ug/l	3.5
carbon tetrachloride	ug/l	0.90
chlordane*	ng/l	0.023
chloroform	mg/l	0.13
DDT*	ng/l	0.17
1,4-dichlorobenzene	ug/l	18
3,3'-dichlorobenzidine	ng/l	8.1

* See Appendix I for definition of terms.

Table B Continued

Chemical	Units of Measurement	30-day Average
1,2-dichloroethane	mg/l	0.13
dichloromethane	mg/l	0.45
1,3-dichloropropene	ug/l	8.9
dieldrin	ng/l	0.040
2,4-dinitrotoluene	ug/l	2.6
1,2-diphenylhydrazine	ug/l	0.16
halomethanes*	mg/l	0.13
heptachlor*	ng/l	0.72
hexachlorobenzene	ng/l	0.21
hexachlorobutadiene	ug/l	14
hexachloroethane	ug/l	2.5
N-nitrosodimethylamine	ug/l	7.3
N-nitrosodiphenylamine	ug/l	2.5
PAHs*	ng/l	8.8
PCBs*	ng/l	0.019
TCDD equivalents*	pg/l	0.0039
tetrachloroethylene	ug/l	99
toxaphene	ng/l	0.21
trichlorocthylene	ug/l	27
2,4,6-trichlorophenol	ug/l	0.29
vinyl chloride	ug/l	36

a) Dischargers may at their option meet this limitation as a total chromium limitation.

b) If a discharger can demonstrate to the satisfaction of the Regional Board (subject to EPA approval) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, effluent limitations for cyanide may be met by the combined measurement of free cyanide, simple alkali metal cyanides, and weakly complexed organometallic cyanide complexes. In order for the analytical method to be acceptable, the recovery of free cyanide from metal complexes must be comparable to that achieved by Standard Methods 412F, G, and H (Standard Methods for the Examination of Water and Wastewater. Joint Editorial Board, American Public Health Association, American Water Works Association, and Water Pollution Control Federation. Most recent edition.).

c) Water quality objectives for total chlorine residual applying to intermittent discharges not exceeding two hours, shall be determined through the use of the following equation:

$$\log y = -0.43 (\log x) + 1.8$$

where: y = the water quality objective (in ug/l) to apply when chlorine is being discharged;
x = the duration of uninterrupted chlorine discharge in minutes.

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* See Appendix I for definition of terms.

Implementation Provisions for Table B

A. Calculation of Effluent Limitations

Effluent limitations for parameters identified in Table B with the exception of Radioactivity, shall be determined through the use of the following equation:

$$Ce = Co + Dm (Co - Cs) \quad (1)$$

where:

Ce = the effluent concentration limit,
Co = the concentration to be met at the completion of initial* dilution,
Cs = background seawater concentration (see Table C below),
Dm = minimum probable initial* dilution expressed as parts seawater per part wastewater.

For the purpose of this Plan, minimum initial dilution is the lowest average initial dilution within any single month of the year. Dilution estimates shall be based on observed waste flow characteristics, observed receiving water density structure, and the assumption that no currents, of sufficient strength to influence the initial dilution process, flow across the discharge structure.

The Executive Director of the State Board shall identify standard dilution models for use in determining Dm, and shall assist the Regional Board in evaluating Dm for specific waste discharger. Dischargers may propose alternative methods of calculating Dm, and the Regional Board may accept such method upon verification of its accuracy and applicability.

TABLE C
BACKGROUND SEAWATER CONCENTRATIONS (Cs)

Waste Constituent	Cs (ug/l)
Arsenic	3
Copper	2
Mercury	0.0005
Silver	0.16
Zinc	8

For all other Table B parameters, Cs = 0.

The six-month median effluent concentration limit shall apply as a moving median of daily values for any 180 day period in which daily values represent flow weighted

* See Appendix I for definition of terms.

average concentrations within a 24-hour period. For intermittent discharges, the daily value shall be considered to equal zero for days on which no discharge occurred.

The daily maximum effluent concentration limit shall apply to flow weighted 24 hour composite samples.

The instantaneous maximum shall apply to grab sample determinations.

If only one sample is collected during the time period associated with the water quality objective (e.g., 30-day average or 6-month median), the single measurement shall be used to determine compliance with the effluent limitation for the entire time period.

Discharge requirements shall also specify effluent requirements in terms of mass emission rate limits utilizing the general formula:

$$lbs/day = 8.34 \times Ce \times Q \quad (2)$$

The six-month median limit on daily mass emissions shall be determined using the six-month median effluent concentration as Ce and the observed flow rate Q in millions of gallons per day. The daily maximum mass emission shall be determined using the daily maximum effluent concentration limit as Ce and the observed flow rate Q in millions of gallons per day.

Any significant change in waste* flow shall be cause for reevaluating effluent quality requirements.

B. Compliance Determination

All analytical data shall be reported uncensored with detection limits and quantitation limits identified. For any effluent limitation, compliance shall be determined using appropriate statistical methods to evaluate multiple samples. Compliance based on a single sample analysis should be determined where appropriate as described below.

When a calculated effluent limitation is greater than or equal to the PQL*, compliance shall be determined based on the calculated effluent limitation and either single or multiple sample analyses.

When the calculated effluent limitation is below the PQL*, compliance determinations based on analysis of a single sample shall only be undertaken if the concentration of the constituent of concern in the sample is greater than or equal to the PQL*.

When the calculated effluent limitation is below the PQL* and recurrent analytical responses between the PQL* and the calculated limit occur, compliance shall be determined by statistical analysis of multiple samples. Sufficient sampling and analysis shall be required to determine compliance.

Published values for MDL*s and PQL*s should be used except where revised MDL*s and PQL*s are available from recent laboratory performance evaluations, in which case the

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* See Appendix I for definition of terms.

revised MDL*s and PQL*s should be used. Where published values are not available the Regional Boards should determine appropriate values based on available information.

If a discharger believes the sample matrix under consideration in the waste discharge requirements is sufficiently different from that used for an established MDL* value, the discharger may demonstrate to the satisfaction of the Regional Board what the appropriate MDL* should be for the discharger's matrix. In this case the PQL* shall be established at the limit of quantitation (equal to 10 standard deviations above the average measured blank used for development of the MDL* in the discharger's matrix).

When determining compliance based on a single sample, with a single effluent limitation which applies to a group of chemicals (e.g., PCBs) concentrations of individual members of the group may be considered to be zero if the analytical response for individual chemicals falls below the MDL* for that parameter.

Due to the large total volume of powerplant and other heat exchange discharges, special procedures must be applied for determining compliance with Table B limitations on a routine basis. Effluent concentration values (Ce) shall be determined through the use of equation 1 considering the minimal probable initial* dilution of the combined effluent (in-plant waste streams plus cooling water flow). These concentration values shall then be converted to mass emission limitations as indicated in equation 2. The mass emission limits will then serve as requirements applied to all inplant waste* streams taken together which discharge into the cooling water flow, except that limitations on total chlorine residual, chronic* toxicity and instantaneous maximum limitations on Table B toxic materials shall apply to, and be measured in, the combined final effluent, as adjusted for dilution with ocean water. The Table B limitation on radioactivity shall apply to the undiluted combined final effluent.

C. Toxicity Reduction Requirements

If a discharge consistently exceeds an effluent limitation based on a toxicity objective in Table B, a toxicity reduction evaluation (TRE) is required. The TRE shall include all reasonable steps to identify the source of toxicity. Once the source(s) of toxicity is identified, the discharger shall take all reasonable steps necessary to reduce toxicity to the required level.

The following shall be incorporated into waste discharge requirements: (1) a requirement to conduct a TRE if the discharge consistently exceeds its toxicity effluent limitation, and (2) a provision requiring a discharger to take all reasonable steps to reduce toxicity once the source of toxicity is identified.

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* See Appendix I for definition of terms.

Chapter V
DISCHARGE PROHIBITIONS

A. Hazardous Substances

The discharge of any radiological, chemical, or biological warfare agent or high-level radioactive waste* into the ocean* is prohibited.

B. Areas of Special Biological Significance

Waste* shall not be discharged to areas designated as being of special biological significance. Discharges shall be located a sufficient distance from such designated areas to assure maintenance of natural water quality conditions in these areas.

C. Sludge

Pipeline discharge of sludge to the ocean* is prohibited by federal law; the discharge of municipal and industrial waste* sludge directly to the ocean*, or into a waste* stream that discharges to the ocean*, is prohibited by this Plan. The discharge of sludge digester supernatant directly to the ocean*, or to a waste* stream that discharges to the ocean* without further treatment, is prohibited.

It is the policy of the State Board that the treatment, use and disposal of sewage sludge shall be carried out in the manner found to have the least adverse impact on the total natural and human environment. Therefore, if federal law is amended to permit such discharge, which could affect California waters, the State Board may consider requests for exceptions to this section under Chapter VI, F. of this Plan, provided further that an Environmental Impact Report on the proposed project shows clearly that any available alternative disposal method will have a greater adverse environmental impact than the proposed project.

D. By-Passing

The by-passing of untreated wastes* containing concentrations of pollutants in excess of those of Table A or Table B to the ocean* is prohibited.

Chapter VI
GENERAL PROVISIONS

A. Effective Date

This Plan is in effect as of the date of adoption by the State Water Resources Control Board.

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* See Appendix I for definition of terms.

B. Waste Discharge Requirements

The Regional Boards may establish more restrictive water quality objectives and effluent quality requirements than those set forth in this Plan as necessary for the protection of beneficial uses of ocean* waters.

Regional Boards may impose alternative less restrictive provisions than those contained within Table B of the Plan, provided an applicant can demonstrate that:

Reasonable control technologies (including source control, material substitution. treatment and dispersion) will not provide for complete compliance; or

Any less stringent provisions would encourage water* reclamation;

Provided further that:

a) Any alternative water quality objectives shall be below the conservative estimate of chronic toxicity, as given in Table D below, and such alternative will provide for adequate protection of the marine environment;

b) A receiving water toxicity* objective of 1 TUc is not exceeded; and

c) The State Board grants an exception (Chapter VI.F.) to the Table B limits as established in the Regional Board findings and alternative limits.

TABLE D
CONSERVATIVE ESTIMATES OF CHRONIC TOXICITY

Constituent	Estimate of Chronic Toxicity (ug/l)
Arsenic	19
Cadmium	8
Hexavalent Chromium	18
Copper	5
Lead	22
Mercury	0.4
Nickel	48
Silver	3
Zinc	51
Cyanide	10
Total Chlorine Residual	10.0
Ammonia	4,000.0
Phenolic Compounds (non-chlorinated)	a)(see below)
Chlorinated Phenolics	a)
Chlorinated Pesticides and PCB's	b)

* See Appendix I for definition of terms.

a. There is insufficient data for phenolics to estimate chronic toxicity levels. Requests for modification of water quality objectives for these waste* constituents must be supported by chronic toxicity data for representative sensitive species. In such cases, applicants seeking modification of water quality objectives should consult the Regional Water Quality Control Board to determine the species and test conditions necessary to evaluate chronic effects.

b. Limitations on chlorinated pesticides and PCB's shall not be modified so that the total of these compounds is increased above the limitations in Table B (6-Month Median = 31 ng/l, Daily Maximum = 62 ng/l, and Instantaneous Maximum = 93 ng/l).

C. Revision of Waste* Discharge Requirements

The Regional Board shall revise the waste* discharge requirements for existing discharges as necessary to achieve compliance with this Plan and shall also establish a time schedule for such compliance.

D. Monitoring Program

The Regional Boards shall require dischargers to conduct self-monitoring programs and submit reports necessary to determine compliance with the waste* discharge requirements, and may require dischargers to contract with agencies or persons acceptable to the Regional Board to provide monitoring reports. Monitoring provisions contained in waste discharge requirements shall be in accordance with the Monitoring Procedures provided in Appendix II.

Where the Regional Board is satisfied that any substance(s) of Table B will not significantly occur in a discharger's effluent, the Regional Board may elect not to require monitoring for such substance(s), provided the discharger submits periodic certification that such substance(s) are not added to the waste* stream, and that no change has occurred in activities that could cause such substance(s) to be present in the waste* stream. Such election does not relieve the discharger from the requirement to meet the limitations of Table B.

The Regional Board may require monitoring of bioaccumulation of toxicants in the discharge zone. Organisms and techniques for such monitoring shall be chosen by the Regional Board on the basis of demonstrated value in waste* discharge monitoring.

E. Areas of Special Biological Significance

Areas of special biological significance shall be designated by the State Board after a public hearing by the Regional Board and review of its recommendations.

F. State Board Exceptions to Plan Requirements

The State Board may, in compliance with the California Environmental Quality Act, subsequent to a public hearing, and with the concurrence of the Environmental Protection Agency, grant exceptions where the Board determines:

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* See Appendix I for definition of terms.

1. **The exception will not compromise protection of ocean* waters for beneficial uses, and**

2. **The public interest will be served.**

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* See Appendix I for definition of terms.

APPENDIX I

DEFINITION OF TERMS

ACUTE TOXICITY

a. **Acute Toxicity (TUa)**

Expressed in Toxic Units Acute (TUa)

TUa = 100/96-hr LC 50%

b. Lethal Concentration 50% (LC 50)

LC 50 (percent waste giving 50% survival of test organisms) shall be determined by static or continuous flow bioassay techniques using standard test species. If specific identifiable substances in wastewater can be demonstrated by the discharger as being rapidly rendered harmless upon discharge to the marine environment, but not as a result of dilution, the LC 50 may be determined after the test samples are adjusted to remove the influence of those substances.

When it is not possible to measure the 96-hour LC 50 due to greater than 50 percent survival of the test species in 100 percent waste, the toxicity concentration shall be calculated by the expression:

$$TUa = \frac{\log (100 - S)}{1.7}$$

S = percentage survival in 100% waste. If S > 99, TUa shall be reported as zero.

CHLORDANE shall mean the sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.

CHRONIC TOXICITY: This parameter shall be used to measure the acceptability of for waters supporting a healthy marine biota until improved methods are developed to evaluate biological response.

a. Chronic Toxicity (TUc)

Expressed as Toxic Units Chronic (TUc)

TUc = 100/NOEL

b. No Observed Effect Level (NOEL)

The NOEL is expressed as the maximum percent effluent or receiving water that causes no observable effect on a test organism, as determined by the result of a critical life stage toxicity test listed in Appendix II.

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* See Appendix I for definition of terms.

DDT shall mean the sum of 4,4'DDT, 2,4'DDT, 4,4'DDE, 2,4'DDE, 4,4'DDD, and 2,4'DDD.

DEGRADE: Degradation shall be determined by comparison of the waste field and reference site(s) for characteristics species diversity, population density, contamination, growth anomalies, debility, or supplanting of normal species by undesirable plant and animal species. Degradation occurs if there are significant differences in any of three major biotic groups, namely, demersal fish, benthic invertebrates, or attached algae. Other groups may be evaluated where benthic species are not affected, or are not the only ones affected.

DICHLOROBENZENES shall mean the sum of 1,2- and 1,3-dichlorobenzene.

ENCLOSED BAYS are indentations along the coast which enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. This definition includes but is not limited to: Humboldt Bay, Bodega Harbor, Tomales Bay, Drakes Estero, San Francisco Bay, Morro Bay, Los Angeles Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay.

ENDOSULFAN shall mean the sum of endosulfan-alpha and -beta and endosulfan sulfate.

ESTUARIES AND COASTAL LAGOONS are waters at the mouths of streams which serve as mixing zones for fresh and ocean waters during a major portion of the year. Mouths of streams which are temporarily separated from the ocean by sandbars shall be considered as estuaries. Estuarine waters will generally be considered to extend from a bay or the open ocean to the upstream limit of tidal action but may be considered to extend seaward if significant mixing of fresh and salt water occurs in the open coastal waters. The waters described by this definition include but are not limited to the Sacramento-San Joaquin Delta as defined by Section 12220 of the California Water Code, Suisun Bay, Carquinez Strait downstream to Carquinez Bridge, and appropriate areas of the Smith, Klamath, Mad, Eel, Noyo, and Russian Rivers.

HALOMETHANES shall mean the sum of bromoform, bromomethane (methyl bromide), chloromethane (methyl chloride), chlorodibromomethane, and dichlorobromomethane.

HEPTACHLOR shall mean the sum of heptachlor and heptachlor epoxide.

HCH shall mean the sum of the alpha, beta, gamma (lindane) and delta isomers of hexachlorocyclohexane.

INITIAL DILUTION is the process which results in the rapid and irreversible turbulent mixing of wastewater with ocean water around the point of discharge.

For a submerged buoyant discharge, characteristic of most municipal and industrial wastes that are released from the submarine outfalls, the momentum of the discharge and its initial buoyancy act together to produce turbulent mixing. Initial

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* See Appendix I for definition of terms.

dilution in this case is completed when the diluting wastewater ceases to rise in the water column and first begins to spread horizontally.

For shallow water submerged discharges, surface discharges, and nonbuoyant discharges, characteristic of cooling water wastes and some individual discharges, turbulent mixing results primarily from the momentum of discharge. Initial dilution, in these cases, is considered to be completed when the momentum induced velocity of the discharge ceases to produce significant mixing of the waste, or the diluting plume reaches a fixed distance from the discharge to be specified by the Regional Board, whichever results in the lower estimate for initial dilution.

KELP BEDS, for purposes of the bacteriological standards of this plan, are significant aggregations of marine algae of the genera Macrocystis and Nereocystis. Kelp beds include the total foliage canopy of Macrocystis and Nereocystis plants throughout the water column.

MARICULTURE is the culture of plants and animals in marine waters independent of any pollution source.

MDL (Method Detection Limit) is the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero, as defined in 40 CFR 136 Appendix B.

NATURAL LIGHT: Reduction of natural light may be determined by the Regional Board by measurement of light transmissivity or total irradiance, or both, according to the monitoring needs of the Regional Board.

OCEAN WATERS are the territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. If a discharge outside the territorial waters of the State could affect the quality of the waters of the State, the discharge may be regulated to assure no violation of the Ocean Plan will occur in ocean waters.

PAHs (polynuclear aromatic hydrocarbons) shall mean the sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene and pyrene.

PCBs (polychlorinated biphenyls) shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.

PQL (Practical Quantitation Level) is the lowest concentration of a substance which can be consistently determined within +/- 20% of the true concentration by 75% of the labs tested in a performance evaluation study. Alternatively, if performance data are not available, the PQL* for carcinogens is the MDL* x 5, and for noncarcinogens is the MDL* x 10.

SHELLFISH are organisms identified by the California Department of Health Services as shellfish for public health purposes (i.e., mussels, clams and oysters).

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* See Appendix I for definition of terms.

SIGNIFICANT difference is defined as a statistically significant difference in the means of two distributions of sampling results at the 95 percent confidence level.

TCDD EQUIVALENTS shall mean the sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown in the table below.

Isomer Group	Toxicity Equivalence Factor
2,3,7,8-tetra CDD	1.0
2,3,7,8-penta CDD	0.5
2,3,7,8-hexa CDDs	0.1
2,3,7,8-hepta CDD	0.01
octa CDD	0.001
2,3,7,8 tetra CDF	0.1
1,2,3,7,8 penta CDF	0.05
2,3,4,7,8 penta CDF	0.5
2,3,7,8 hexa CDFs	0.1
2,3,7,8 hepta CDFs	0.01
octa CDF	0.001

WASTE: As used in this Plan, waste includes a discharger's total discharge, of whatever origin, i.e., gross, not net, discharge.

WATER RECLAMATION: The treatment of wastewater to render it suitable for reuse, the transportation of treated wastewater to the place of use, and the actual use of treated wastewater for a direct beneficial use or controlled use that would not otherwise occur.

* See Appendix I for definition of terms.

APPENDIX II

STANDARD MONITORING PROCEDURES

The purpose of this appendix is to provide direction to the Regional Boards on the implementation of the California Ocean Plan and to ensure the reporting of useful information. It is not feasible to cover all circumstances and conditions that could be encountered by all dischargers. Therefore, this appendix should be considered as the basic components of any discharger monitoring program. Regional Boards can deviate from the procedures required in the appendix only with the approval of the State Water Resources Control Board unless the Ocean Plan allows for the selection of alternate protocols by the Regional Boards. If no direction is given in this appendix for a specific provision of the Ocean Plan, it is within the discretion of the Regional Board to establish the monitoring requirements for the provision.

The appendix is organized in the same manner as the Ocean Plan.

Chapter II. A. Bacterial Standards:

For all bacterial analyses, sample dilutions should be performed so the range of values extends from 2 to 16,000. The detection methods used for each analysis shall be reported with the results of the analysis.

Detection methods used for coliforms (total and fecal) shall be those presented in the most recent edition of Standard Methods for the Examination of Water and Wastewater or any improved method determined by the Regional Board (and approved by EPA) to be appropriate.

Detection methods used for enterococcus shall be those presented in EPA publication EPA 600/4-85/076, Test Methods for Escherichia coli and Enterococci in Water By Membrane Filter Procedure or any improved method determined by the Regional Board to be appropriate.

Chapter IV. Table B. Compliance with Table B objectives:

Procedures, calibration techniques, and instrument/reagent specifications used to determine compliance with Table B shall conform to the requirements of federal regulations (40 CFR 136). All methods shall be specified in the monitoring requirement section of waste discharge requirements.

Where methods are not available in 40 CFR 136, the Regional Boards shall specify suitable analytical methods in waste discharge requirements. Acceptance of data should be predicated on demonstrated laboratory performance.

The State or Regional Board may, subject to EPA approval, specify test methods which are more sensitive than those specified in 40 CFR 136. Total chlorine residual is likely to be a method detection limit effluent requirement in many cases. The limit of detection of total chlorine residual in standard test methods is less than or equal to 20 ug/l.

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* See Appendix I for definition of terms.

Monitoring for the substances in Table B shall be required periodically. For discharges less than 1 MGD (million gallons per day), the monitoring of all the Table B parameters should consist of at least one complete scan of the Table B constituents one time in the life of the waste discharge requirements. For discharges between 1 and 10 MGD, the monitoring frequency shall be at least one complete scan of the Table B substances annually. Discharges greater than 10 MGD shall be required to monitor at least semiannually.

Chapter IV. Compliance with Toxicity Objectives

Compliance with the acute toxicity objective (TUa) in Table A shall be determined using an established protocol, e.g., American Society for Testing Materials (ASTM), EPA, American Public Health Association, or State Board.

The Regional Board shall require the use of critical life stage toxicity tests specified in this Appendix to measure TUc. Other species or protocols will be added to the list after State Board review and approval. A minimum of three test species with approved test protocols shall be used to measure compliance with the toxicity objective. If possible, the test species shall include a fish, an invertebrate, and an aquatic plant. After a screening period, monitoring can be reduced to the most sensitive species. Dilution and control water should be obtained from an unaffected area of the receiving waters. The sensitivity of the test organisms to a reference toxicant shall be determined concurrently with each bioassay test and reported with the test results.

Use of critical life stage bioassay testing shall be included in waste discharge requirements as a monitoring requirement for all discharges greater than 100 MGD by January 1, 1991 at the latest. For other major dischargers, critical life stage bioassay testing shall be included as a monitoring requirement one year before the waste discharge requirement is scheduled for renewal. For major dischargers scheduled for waste discharge requirements renewal less than one year after the adoption of the toxicity objective, critical life stage bioassay testing shall be included as a monitoring requirement at the same time as the chronic toxicity effluent limits is established in the waste discharge requirements.

The following tests shall be used to measure TUc. Other tests may be added to the list when approved by the State Board.

Species	Effect	Test Duration	Reference
red alga, Champia parvula	number of cystocarps	7-9 days	1
giant kelp, Macrocystis pyrifera	percent germination; germ tube length	48 hours	2
abalone, Haliotis rufescens	abnormal shell development	48 hours	2

* See Appendix I for definition of terms.

oyster, Crassostrea gigas; mussel, Mytilus edulis	abnormal shell development; percent survival	48 hours	3
urchins, Strongylocentrotus purpuratus, S. franciscanus; sand dollar, Dendraster excentricus	percent fertilization	1 hour	4
shrimp, Mysidopsis bahia	percent survival; growth; fecundity	7 days	1
silversides, Menidia beryllina	larval growth rate; percent survival	7 days	1

Bioassay References

1. Weber, C.I., W.B. Horning, II, D.J. Klemm, T.W. Neiheisel, P.A. Lewis, E.L. Robinson, J. Menkedick, and F. Kessler (eds.). 1988. Short-term methods for estimating the chronic toxicity of effluents and receiving waters to marine and estuarine organisms. EPA-600/4-87/028. National Technical Information Service, Springfield, VA.

2. Hunt, J.W., B.S. Anderson, S.L. Turpin, A.R. Conlon, M. Martin, F.H. Palmer, and J.J. Janik. 1989. Experimental Evaluation of Effluent Toxicity Testing Protocols with Giant Kelp, Mysids, Red Abalone, and Topsmelt. Marine Bioassay Project. Fourth Report. California State Water Resources Control Board, Sacramento.

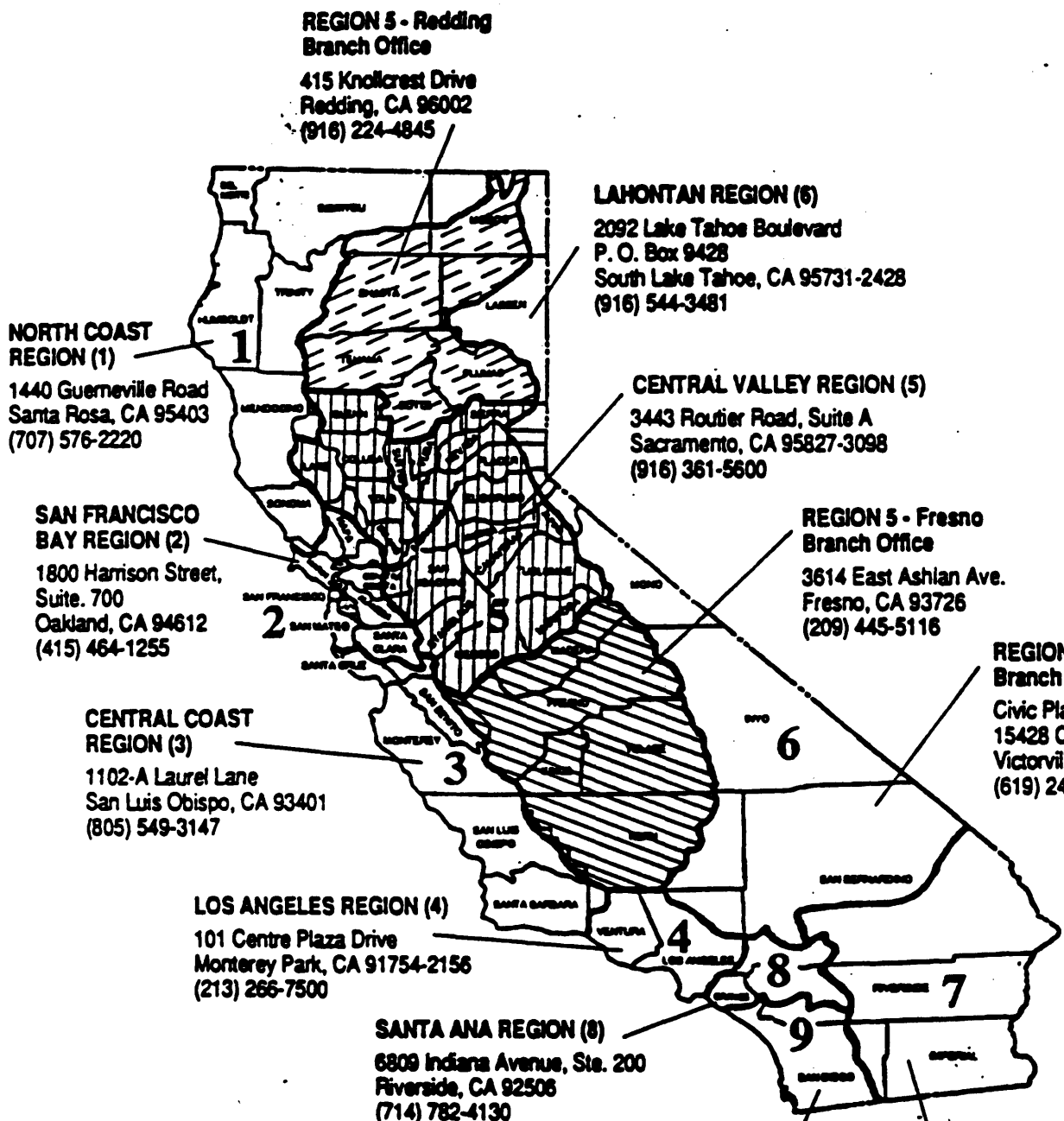
3. American Society for Testing Materials (ASTM). 1987. Standard Practice for conducting static acute toxicity tests with larvae of four species of bivalve molluscs. Procedure E 724-80. ASTM, Philadelphia, PA.

4. Dinnel, P.J., J. Link, and Q. Stober. 1987. Improved methodology for sea urchin sperm cell bioassay for marine waters. Archives of Environmental Contamination and Toxicology 16: 23-32.

* See Appendix I for definition of terms.

STATE WATER RESOURCES CONTROL BOARD
P. O. Box 100, Sacramento, CA 95801

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARDS



REGION 5 - Redding Branch Office
415 Knollcrest Drive
Redding, CA 96002
(916) 224-4845

LAHONTAN REGION (6)
2092 Lake Tahoe Boulevard
P. O. Box 9428
South Lake Tahoe, CA 95731-2428
(916) 544-3481

NORTH COAST REGION (1)
1440 Guerneville Road
Santa Rosa, CA 95403
(707) 576-2220

CENTRAL VALLEY REGION (5)
3443 Routier Road, Suite A
Sacramento, CA 95827-3098
(916) 361-5600

SAN FRANCISCO BAY REGION (2)
1800 Harrison Street,
Suite. 700
Oakland, CA 94612
(415) 464-1255

REGION 5 - Fresno Branch Office
3614 East Ashlan Ave.
Fresno, CA 93726
(209) 445-5116

REGION 6 - Victorville Branch Office
Civic Plaza
15428 Civic Drive, Suite 100
Victorville, CA 92392-2359
(619) 241-6583

CENTRAL COAST REGION (3)
1102-A Laurel Lane
San Luis Obispo, CA 93401
(805) 549-3147

LOS ANGELES REGION (4)
101 Centre Plaza Drive
Monterey Park, CA 91754-2156
(213) 266-7500

SANTA ANA REGION (8)
6809 Indiana Avenue, Ste. 200
Riverside, CA 92506
(714) 782-4130

SAN DIEGO REGION (9)
9771 Clairemont Mesa Blvd.
Suite. B
San Diego, CA 92124
(619) 265-5114

COLORADO RIVER BASIN REGION (7)
73-271 Highway 111,
Suite. 21
Palm Desert, CA 92260
(619) 346-7491

APPENDIX A-12

Discharges of Municipal Solid Waste Policy

STATE WATER RESOURCES CONTROL BOARD
RESOLUTION NO. 93-62

POLICY FOR REGULATION OF DISCHARGES OF MUNICIPAL SOLID WASTE

WHEREAS:

1. **Water quality protection**–The State Water Resources Control Board (**State Water Board**) and each Regional Water Quality Control Board (**Regional Water Board**) are the state agencies with primary responsibility for the coordination and control of water quality (California Water Code Section 13001, "WC §13001");

2. **State Policy for Water Quality Control**–The State Water Board is authorized to adopt State Policy For Water Quality Control which may consist of or contain "...principles and guidelines deemed essential by the state board for water quality control" (Authority: WC §§1058, 13140, 13142);

3. **State agency compliance**–All State agencies shall comply with State Policy For Water Quality Control regarding any activities that could affect water quality (WC §13146);

4. **Waste Discharge Requirements**–Regional Water Boards regulate discharges of waste that could affect the quality of waters of the state, including discharges of solid waste to land, through the issuance of waste discharge requirements (WC §13263);

5. **Solid waste disposal**–The State Water Board is directed to classify wastes according to threat to water quality and to classify waste disposal sites according to ability to protect water quality (WC §13172);

6. **Chapter 15**–The State Water Board promulgated regulations, codified in Chapter 15 of Division 3 of Title 23 of the California Code of Regulations (23 CCR §§2510-2601, "**Chapter 15**"), governing discharges of waste to land. These regulations:

   a. Contain classification criteria for wastes and for disposal sites;

   b. Prescribe minimum standards for the siting, design, construction, monitoring, and closure of waste management units;

7. **Federal authority**–The federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (42 USC §6901, *et seq*, "**SWDA**"), authorizes development of nationwide standards for disposal sites for municipal solid waste [MSW], including criteria for sanitary landfills (SWDA §§1007, 4004, 42 USC §§6907, 6944);

8. **Federal MSW regulations**–On October 9, 1991, the United States Environmental Protection Agency (USEPA) promulgated regulations that apply, in California, to dischargers who own or operate landfills which accept municipal solid waste on or after October 9, 1991, (**MSW landfills**), regardless of whether or not a permit is issued (Title 40, Code of Federal Regulations [CFR], Parts 257 and 258, "**federal MSW regulations**"). The majority of the federal MSW regulations become effective on what is hereinafter referred to as the "**Federal Deadline**" [40 CFR §258.1(e)], currently October 9, 1993;

9. **States required to apply federal MSW regulations**–Each state must "...adopt and implement a permit program or other system of prior approval and conditions to assure that each...[MSW landfill]...within such state...will comply with the...[federal MSW landfill regulations]." State regulations promulgated to satisfy this requirement are subject to approval by USEPA. (SWDA §§4003, 4005, 42 USC §§6943, 6945);

10. **Approved state's authority**–The permitting authority in an "approved state" may approve engineered alternatives to certain prescriptive standards contained in the federal MSW regulations, provided that the alternative meets specified conditions and performance standards (40 CFR 256.21);

11. **State application**–The State Water Board and the Integrated Waste Management Board submitted an application for program approval to the USEPA on February 1, 1993;

12. **Chapter 15 deficiencies**–The State Water Board's Chapter 15 regulations are comparable to the federal MSW regulations. Nevertheless, the USEPA has identified several areas of Chapter 15 which are not adequate to ensure compliance with

certain provisions of the federal MSW regulations, as summarized in Attachment I;

13. **Rulemaking to amend Chapter 15**–There is insufficient time, prior to October 9, 1993, for the State Water Board to amend Chapter 15 to ensure complete consistency with the federal MSW regulations and subsequently for the USEPA to carry out a review of the revised chapter and to render a decision approving California's permit program;

14. **Composite liner(s) needed**–Solid Waste Assessment Test Reports, submitted to Regional Water Boards pursuant to WC §13273, have shown that releases of leachate and gas from MSW landfills that are unlined are likely to degrade the quality of underlying ground water. Research on liner systems for landfills indicates that (a) single clay liners will only delay, rather than preclude, the onset of leachate leakage, and (b) the use of composite liners represents the most effective approach for reliably containing leachate and landfill gas;

15. **Lack of compliance with Chapter 15**–WDRs for many MSW landfills have not been revised to meet the most recent Chapter 15 amendments;

16. CEQA–Adoption of this policy is categorically exempt from the provisions of the California Environmental Quality Act (Division 13, commencing with §21000, of the Public Resources Code, "CEQA") because it is an action by a regulatory agency for the protection of natural resources, within the meaning of §15307 of the *Guidelines For Implementation of California Environmental Quality Act* in Title 14 of the California Code of Regulations;

17. **Public notice**–Notice of the State Water Board's proposal to adopt a State Policy for Water Quality Control regarding Regulation of Discharges of Municipal Solid Waste was published on March 31, 1993, and a public hearing on the matter was held on June 1, 1993; and

18. **Reference**—This Policy implements, interprets, or makes specific the following Water Code Sections: §13142, §13160, §13163, and §13172.

THEREFORE BE IT RESOLVED:

I. Implementation of the Chapter 15 and federal MSW regulations:

A. **WDR revision**—In order to insure compliance with SWDA §§4003, 4005 (42 USC §§6943, 6945), each Regional Water Board shall henceforth implement in waste discharge requirements for discharges at MSW landfills, both the Chapter 15 regulations and those applicable provisions of the federal MSW regulations that are necessary to protect water quality, particularly the containment provisions stipulated in Section III of this Policy and the provisions identified in Attachment I to this Policy, and shall revise existing waste discharge requirements to accomplish this according to the schedule provided in Section II of this Policy;

B. **Alternatives limited**—The Regional Water Board shall not rely upon any exemption or alternative allowed by Chapter 15 if such an exemption or alternative would not be allowed under the federal MSW regulations, nor shall the Regional Water Board waive waste discharge requirements for the discharge of municipal solid waste at landfills;

C. **Applicability in the absence of useable waters**—Although all other provisions of this Policy would continue to apply, the Regional Water Board shall have the discretion to prescribe requirements for containment systems and water quality monitoring systems that are less stringent than the design and construction standards in this Policy, in the federal MSW regulations, and in Chapter 15 if the Regional Water Board finds that the containment systems satisfy the performance standard for liners in the federal MSW regulations [40 CFR §§258.40(a)(1) and (c)], that the prerequisite for an exemption from ground water monitoring in the federal MSW regulations is satisfied [40 CFR §258.50(b)], and that either of the following two conditions is satisfied:

1. A hydrogeologic investigation shows that:

   a. There is no aquifer (i.e., a geological formation, group of formations, or portion of a formation capable of yielding significant quantities of ground water to wells or springs) underlying the facility property; and

   b. It is not reasonably foreseeable that fluids—including leachate and landfill gas—migrating from the landfill could reach any aquifer or surface water body in the ground water basin within which the landfill is located; or

2. The ground water in the basin underlying the facility has no beneficial uses and a hydrogeologic investigation shows that it is not reasonably foreseeable that fluids—including leachate and landfill gas—migrating from the landfill could reach any aquifer or surface water body having beneficial uses.

II. Implementation schedule:

A. **MSW landfills**–By the Federal Deadline (e.g., October 9, 1993), each Regional Water Board shall amend the waste discharge requirements for discharges of waste at all MSW landfills in its region (including discharges to any area outside the actual waste boundaries of an MSW landfill as they exist on that date ["lateral expansion" hereinafter]), to require persons who own or operate such landfills to:

1. Except for the ground water monitoring and corrective action requirements under 40 CFR §§258.50-258.58, comply with all applicable portions of the federal MSW regulations by the Federal Deadline; and

2. Achieve full compliance with Chapter 15 and with the federal ground water monitoring and corrective action requirements under 40 CFR §§258.50-258.58 as follows:

   a. For all MSW landfills that are less than one mile from a drinking water intake (surface or subsurface), by no later than October 9, 1994; and

   b. For all other MSW landfills that have accepted waste prior to the effective date of this Policy, by no later than October 9, 1995;

B. **Proposed MSW landfills**–As of the date of the Federal Deadline, waste discharge requirements for the discharge of waste at all MSW landfills that have not accepted waste as of that date shall ensure full compliance both with Chapter 15 and with the federal MSW regulations prior to the discharge of waste to that landfill.

III. Containment–As of the Federal Deadline, discharges of waste to either an MSW landfill that has not received waste as of that date or to a lateral expansion of an MSW landfill unit are prohibited unless the discharge is to an area equipped with a containment system which is constructed in accordance with the standard of the industry and which meets the following additional requirements for both liners and leachate collection systems:

A. **Standards for liners**

1. **Post-Federal Deadline construction**–Except as provided in either §III.A.3. (for steep sideslopes) or §III.A.2. (for new discharges to pre-existing liners), after the Federal Deadline, all containment systems shall include a composite liner that consists of an upper synthetic flexible membrane component (Synthetic Liner) and a lower component of soil, and that either:

   a. **Prescriptive Design**:

      i. **Upper component**–Has a Synthetic Liner at least 40-mils thick (or at least 60-mils thick if of high density polyethylene) that is installed in direct and uniform contact with the underlying compacted soil component described in paragraph III.A.1.a.ii.; and

      ii. **Lower component**–Has a layer of compacted soil that is at least two feet thick and that has an hydraulic conductivity of no more than 1×10^{-7} cm/sec (0.1 feet/year); or

   b. **Alternative design**–Satisfies the performance criteria contained in 40 CFR §§258.40(a)(1) and (c), and satisfies the criteria for an engineered alternative to the above Prescriptive Design [as provided by 23 CCR §2510(b)], where the performance of the alternative composite liner's components, in combination, equal or exceed the waste containment capability of the Prescriptive Design;

2. **New discharges to liners constructed prior to the Federal Deadline**–Except as provided in §III.A.3. (for steep sideslopes), containment systems that will begin to accept municipal solid waste after the Federal Deadline, but which have been constructed prior to the Federal Deadline, are not required to meet the provisions of §III.A.1. if the containment system includes a composite liner that:

   a. **Prescriptive Design**–Features as its uppermost component a Synthetic Liner at least 40-mils thick (or at least 60-mils if high density polyethylene) that is installed in direct and uniform contact with the underlying materials; and

   b. **Performance**–Meets the performance criteria contained in 40 CFR §§258.40(a)(1) and (c);

3. **Steep sideslopes**–Containment systems installed in those portions of an MSW landfill where an engineering analysis shows, and the Regional Water Board finds, that sideslopes are too steep to permit construction of a stable composite liner that meets the prescriptive standards contained in §§III.A.1 or 2. shall include an alternative liner that meets the performance criteria

contained in 40 CFR §§258.40(a)(1) and (c) and that either:

a. Is a composite system and includes as its uppermost component a Synthetic Liner at least 40-mils thick (or at least 60-mils if high density polyethylene) that is installed in direct and uniform contact with the underlying materials; or

b. Is not a composite system, but includes a Synthetic Liner at least 60-mils thick (or at least 80-mils if of high density polyethylene) that is installed in direct and uniform contact with the underlying materials; and

B. **Standards for leachate collection**–Include a leachate collection and removal system which conveys to a sump (or other appropriate collection area lined in accordance with §III.A.) all leachate which reaches the liner, and which does not rely upon unlined or clay-lined areas for such conveyance.

CERTIFICATION

The undersigned, Administrative Assistant to the Board, does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Resources Control Board held on June 17, 1993.

Maureen Marchè
Administrative Assistant to the Board

ATTACHMENT I

To Resolution No. 93-62

Pursuant to §I.A., in writing or revising the waste discharge requirements for MSW landfills, Regional Water Boards shall implement those portions of the following sections of the federal MSW regulations that either are more stringent than, or do not exist within, Chapter 15.

- **Floodplains**–40 CFR §§258.11 and 258.16
- **Wetlands**–40 CFR §258.12
- **Unstable areas**–40 CFR §§258.15 and 258.16
- **Run-on/Run-off control systems**—40 CFR §258.26
- **Liquids acceptance**–40 CFR §§258.28 [esp. §(a)(2)]
- **Design Criteria**—40 CFR §258.40, according to the provisions of Section III
- **Well/piezometer performance**–40 CFR §258.51
- **Ground-water sampling/analysis**—40 CFR §258.53
- **Monitoring Parameters**–40 CFR §258.54 and Appendix I to Part 258
- **Constituents of Concern**–40 CFR §258.55 and Appendix II to Part 258
- **Response to a release**–40 CFR §§258.55 [esp. §(g)(1)(ii, iii)]
- **Establishing corrective action measures**–40 CFR §§258.56 [esp. §§(c and d)] and 258.57
- **Ending corrective action program**–40 CFR §258.58 [esp. §(e)]
- **Closure/post-closure**–40 CFR §§258.60-258.61 [esp. §§258.60(a-g)]
- **Deed notation**–40 CFR §258.60(i)
- **Ending post-closure**–40 CFR §258.61 [esp. §§(a and b)]
- **Corrective action financial assurance**—40 CFR §258.73

APPENDIX A-13

Sewerage Facilities and Septic Tanks in Urbanizing Areas in the Central Coast Region

CENTRAL COASTAL REGIONAL WATER QUALITY CONTROL BOARD

RESOLUTION NO. 69 - 1

ADOPTING POLICY STATEMENT REGARDING SEWERAGE FACILITIES AND SEPTIC TANKS IN URBANIZING AREAS IN THE CENTRAL COASTAL REGION.

WHEREAS, Section 13052(e) of the California Water Code states that each regional board, with respect to its region, shall:

> "Formulate and adopt long-range plans and policies with respect to water pollution control and water quality control within the region to conformity with the policies set forth in Chapter 1 (commencing at Section 13000) and any water quality control policy adopted at any time by the state board."; and,

WHEREAS, Section 13052(a) of the California Water Code states that each regional board, with respect to its region, shall:

> "Obtain coordinated action in water quality control and in the abatement, prevention and control of water pollution and nuisance by means of formal or informal meetings of the persons involved."; and,

WHEREAS, Section 13052(d) of the California Water Code states that each regional board, with respect to its region, shall:

> "Request enforcement of laws concerning water pollution or nuisance by appropriate federal, state and local agencies."; and,

WHEREAS, Section 13052(c) of the California Water Code states that each regional board, with respect to its region, shall:

> "Require any state or local agency to inspect and report on any technical factors involved in water pollution or nuisance."; and,

WHEREAS, within the context of this policy the term "urbanizing areas" refers to areas subject to rapid and/or concentrated development and subdivision areas of less concentrated development with individual parcels of land less than 2.5 acres; and,

WHEREAS, this board has evidence that many past, present and potential water pollution problems in the region result from the practice of serving new residential subdivisions and other urbanizing areas with individual septic tanks and leaching systems or with small, community sewerage systems that fail to provide satisfactory service; and,

WHEREAS, this board has observed that water pollution problems do not develop where local government recognizes the potential for such problems well in advance and takes steps to prevent them; and,

WHEREAS, after adequate notice, public hearings were held to receive testimony from all persons present and desiring to be heard concerning this matter; and,

WHEREAS, the board has reviewed the testimony received at the public hearings and the written statements from interested persons; now therefore, be it

RESOLVED, that it is the policy of this Board that city and county governments are requested to:

1. Prohibit the use of septic tanks and leaching systems for sewage disposal:

   a. For any subdivision of land which comes under the provisions of the Subdivision Map Act of California unless the subdivider clearly demonstrates to the satisfaction of the governing body having jurisdiction that the use of septic tanks will be in the best public interest and that the beneficial uses of water of the state will not be adversely affected;

   b. For any area where minimum lot sizes, dwelling densities, construction standards, percolation rates and minimum physiographic conditions have not been established by county ordinance; and

   c. For any other area where the continued use of septic tanks constitutes a public health hazard, or existing or threatened condition of water pollution or nuisance.

2. Prohibit the development of any subdivision, trailer park, or similar development that will use its own community system for the disposal of sewage unless:

   a. The subdivision, trailer park, or similar development is within or has access to a pre-existing governmental entity (city or district) that has authority to and has stated its intent to assume responsibility for the planning, construction, operation, and maintenance of the sewerage system or has authority to and has stated its intent to review plans and construction and assume operation and maintenance of the sewerage system upon certification by the appropriate health officer that the system is failing; and,

b. The governmental entity (county, city or district) has developed a master plan for sewerage, pursuant to Section 65300, et seq. of the California Government Code, which includes the subdivision, trailer park, or similar development; and, be it further

RESOLVED, that this Board intends:

1. To continue to observe the progress made by local government in the Central Coastal Region toward prevention of water pollution and nuisance problems which may result from individual sewage disposal systems and from small community sewerage systems; and,

2. To seek enforcement action if and when it appears to the Board that such action is needed to prevent water pollution, nuisance or contamination because of inadequate control of development in urbanizing areas by local government; and be it further

RESOLVED, that this Board instructs its Executive Officer to transmit this resolution to all interested parties, including but not limited to the governing body of each city and county and to appropriate districts in the Central Coastal Region, and urges each body to give its full support to the policy enunciated above; and be it further

RESOLVED, that this Board requests each agency which has power to regulate the types of development that are covered by this resolution to make copies of this resolution available to all persons proposing such developments at the earliest practicable time so that each will be advised of the policy of the Regional Board in this matter.

Adopted by the Central Coastal Regional Water Quality Control Board on February 14, 1969.

Bertram H. Mudgett

BERTRAM H. MUDGETT, Chairman

ATTEST:

Kenneth R. Jones

KENNETH R. JONES, Executive Officer

APPENDIX A-14

Acceptance of Monterey County Board of Supervisor's Ordinance Applying Development Restrictions to the Bays Hills (Bay Farms/Hillcrest)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
1102 A Laurel Lane
San Luis Obispo, California 93401

RESOLUTION NO. 86-02

Acceptance of Monterey County Board of Supervisor's Ordinance Applying Development Restrictions to the Bay Hills Area

WHEREAS, the California Regional Water Quality Control Board, Central Coast Region (hereafter Regional Board), adopted the Water Quality Control Plan for the Central Coast Basin (hereafter Basin Plan), on March 14, 1975: and,

WHEREAS, in a meeting on May 16, 1984, the Monterey County Supervisor for the Bay Farms/Hillcrest area (also known as Bay Hills) discussed the area's sewage disposal problems with Regional Board staff; and,

WHEREAS, in a letter to the County dated June 8, 1984, Regional Board staff recommended the County further investigate wastewater problems and consider a local building moratorium in lieu of a Regional Board Basin Plan amendment prohibiting individual septic system discharges in Bay Hills; and,

WHEREAS, the Bay Farms/Hillcrest area of Northern Monterey County has been designated Bay Hills County Water District, and is recognized by the State of California as such; and,

WHEREAS, the County conducted investigations and prepared a report entitled "Bay Farms Groundwater & Septic Tank Report, May, 1985," providing documentation for a moratorium; and,

WHEREAS, the State Water Resources Control Board (hereafter State Board), adopted Resolution No. 84-3, which accepts locally imposed moratoriums in lieu of Regional Board prohibitions; and,

WHEREAS, the County has declared the Bay Farms/Hillcrest area in Pajaro, California, as a "Health Hazard Area" because of contamination of domestic water systems from existing septic tank systems and endangerment of public health due to surfacing septic system effluent; and,

WHEREAS, the County, on June 25, 1985, adopted "An Ordinance of the County of Monterey, State of California, Applying Development Restrictions to the Area Generally Within the Proposed Bay Hill County Water District;" and,

WHEREAS, the Regional Board accepted public testimony and considered the County's Ordinance at the Regional Board's regularly scheduled meeting on January 10, 1986, in the Salinas City Council Chambers Rotunda, 200 Lincoln Avenue, Salinas, California.

NOW, THEREFORE, BE IT RESOLVED, that the Regional Board accepts the County's moratorium for Bay Hills adopted under its Ordinance, in lieu of a Regional Board prohibition.

BE IT FURTHER RESOLVED, that the County of Monterey is requested to coordinate a project to eliminate discharge from individual sewage disposal systems in Bay Hills according to the following schedule:

Task	Compliance Date
Begin Planning	February 1, 1986
Complete Planning	September 1, 1986
Begin Design	November 1, 1986
Complete Design	June 1, 1987
Begin Construction	March 1, 1988
Complete Construction	March 1, 1989
Cease Discharge	June 1, 1989

BE IT FURTHER RESOLVED, the Regional Board assumes authority for approval of any exemptions to the moratorium, consistent with exemption criteria contained in the Basin Plan.

BE IT FURTHER RESOLVED, that the State Water Resources Control Board is hereby requested to amend forthwith all appropriate Clean Water Grant Project Priority Lists to recognize the necessary structural solution for Bay Hills Area as a Class "A" project.

BE IT FURTHER RESOLVED, that the State Board is hereby requested to assist the local agencies in finding means to finance the design and construction of the recommended project (e.g., favorable consideration for a State Water Quality Control Fund loan or Small Communities Supplemental Assistance for the local share of project costs).

I, KENNETH R. JONES, Executive Officer of the California Regional Water Quality Control Board, Central Coast Region, do hereby certify that the foregoing is a full, true, and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, Central Coast Region, on January 10, 1986.

Executive Officer

APPENDIX A-15

Acceptance of Monterey County Board of Supervisors' Ordinance Applying Development Restrictions to the Area within the San Lucas County Water District

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
1102A Laurel Lane
San Luis Obispo, California 93401

RESOLUTION NO. 87-05

Acceptance of Monterey County Board of Supervisors' Ordinance Applying Development Restrictions to the Area within the San Lucas County Water District

WHEREAS, the California Regional Water Quality Control Board, Central Coast Region (hereafter Regional Board), adopted the Water Quality Control Plan for the Central Coast Basin (hereafter Basin Plan), on March 14, 1975; and,

WHEREAS, the Monterey County Health Department conducted investigations, and with Clean Water Bond pollution studies grant contracted EMCON Associates to conduct a study of the area; and,

WHEREAS, EMCON prepared a report based on this study entitled "San Lucas Water District Pollution Study, Monterey County, California, December 19, 1986," and arrived at the conclusion that ground water quality beneath San Lucas has been significantly degraded due to high septic system density and large percentages of septic system failures in the community; and,

WHEREAS, in a letter to the Monterey County Health Department dated May 29, 1987, the Division of Clean Water Grants, State Water Resources Control Board (hereafter State Board), stated after its review of the pollution study report, it was recommending that the project be placed on the FY 1988 Clean Water Grant Priority List in an "A" classification; and,

WHEREAS, in this same letter, the State Board advised the County that they and the Central Coast Regional Board must adopt a local moritorium before the San Lucas project could be placed in Priority Class "A;" and,

WHEREAS, the County has declared the San Lucas County Water District area as a "Health Hazard Area" because of contamination of domestic water systems from existing septic tank systems and endangerment of public health due to surfacing septic system effluent; and,

WHEREAS, the County, on June 23, 1987, adopted "An Ordinance of the County of Monterey, State of California, Applying Development Restrictions to the Area Generally Within the San Lucas County Water District;" and,

WHEREAS, the State Board adopted Resolution No. 84-3, which accepts locally imposed moratoriums in lieu of Regional Board prohibitions; and,

WHEREAS, the Regional Board accepted public testimony and considered the County's Ordinance at the Regional Board's regularly scheduled meeting on September 4, 1987, in San Luis Obispo City Hall Council Chambers, 990 Palm Street, San Luis Obispo, California.

NOW, THERERFORE, BE IT RESOLVED, that the Regional Board accepts the County's moratorium for the area within the San Lucas County Water District, adopted under County Ordinance No. 3247, in lieu of a Regional Board prohibition.

BE IT FURTHER RESOLVED, that the County of Monterey is requested to coordinate a project to eliminate discharge from individual sewage disposal systems in San Lucas according to the following schedule:

Task	Compliance Date
Begin Planning	November 20, 1987
Complete Planning	March 1, 1988
Begin Design	April 1, 1988
Complete Design	July 1, 1988
Begin Construction	October 15, 1988
Complete Construction	November 1, 1989
Cease Discharge	February 15, 1990

BE IT FURTHER RESOLVED, the Regional Board assumes authority for approval of any exemptions to the moratorium, consistent with exemption criteria contained in the Basin Plan.

BE IT FURTHER RESOLVED, that the State Board is hereby requested to amend forthwith all appropriate Clean Water Grant Project Lists to recognize the necessary structural solution for San Lucas County Water District as a Class "A" project.

I, WILLIAM R. LEONARD, Executive Officer of the California Regional Water Quality Control Board, do hereby certify that the foregoing is a full, true, and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, Central Coast Region, on September 4, 1987.

William R. Leonard
Executive Officer

APPENDIX A-16

Policy Regarding Beneficial Use of Oil Field Waste Materials in the Santa Maria Oil Fields, Santa Barbara County

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

RESOLUTION NO. 73-5

ADOPTING POLICY REGARDING BENEFICIAL USE OF OIL FIELD WASTE MATERIALS IN THE SANTA MARIA VALLEY OIL FIELDS, SANTA BARBARA COUNTY

WHEREAS, Water Code Section 13224 states:

"Each Regional Board may issue policy statements relating to any water quality matter within its jurisdiction."; and,

WHEREAS, oil field waste materials, including but not limited to "drilling muds", oily wastes and brines, generally contain toxic substances and materials which could significantly impair the quality of usable waters and generally constitute Group I wastes as defined by California Administrative Code, Title 23, Chapter 3, Subchapter 15, Article 3, Section 2520; and

WHEREAS, Group I wastes, such as oil field waste materials, may ordinarily be deposited only at a Class I or Class II-1 disposal site; and

WHEREAS, California Administrative Code, Title 23, Chapter 3, Subchapter 15, Article 5, Section 2540, provides:

"The regional board may waive the reporting of solid waste discharge, or approval and classification of disposal sites or types of sites, or the establishment of waste discharge requirements as provided by Section 13269 of the Water Code when an operation will not unreasonably affect water quality because of the type of waste and disposal operation, or an operation is in compliance with ordinances or regulations of other governmental agencies which adequately protect water quality. Such waivers shall be conditional and may be terminated by the regional board at any time."; and

WHEREAS, Water Code Sections 14040 and 14041 state:

"Each regional board shall approve sites suitable for the disposal of different kinds of liquid wastes, consistent with the classifications that shall be adopted by the state board, and may adopt regulations for disposal of liquid waste at such approved sites that it deems are necessary for the protection of the quality of the waters of the state."

"The hauler of liquid waste shall dispose of liquid waste in accordance with the regulations adopted by the Regional Board and shall dispose of only such type of waste as was designated for a particular site."; and

WHEREAS, under appropriate circumstances, certain clean fresh water "drilling muds" may be usable for beneficial purposes such as sealing of agricultural reservoir sites, improving tillability of certain soils, and stabilizing sandy soils without causing water quality problems or nuisance conditions; and,

WHEREAS, under appropriate circumstances, certain oily wastes may be usable for beneficial purposes such as dust control, weed abatement and road construction without causing water quality problems or nuisance conditions; and

WHEREAS, in the Santa Maria Valley oil fields, it appears possible, with appropriate care, to separate those oil field waste materials which may be appropriate for beneficial uses from those materials not suitable for beneficial uses;

NOW THEREFORE BE IT RESOLVED that the following shall constitute the policy of this Board regarding beneficial use of oil field waste materials in the Santa Maria Valley oil fields, Santa Barbara County:

1. Except as hereafter expressly provided, all oil field waste materials, including but not limited to "drilling muds", oily wastes, and brines, shall be deposited at an appropriate and approved Class I or Class II-1 disposal site.

2. The following oil field waste materials may be deposited for an appropriate beneficial use at sites other than a Class I or Class II-1 disposal site provided that such site has been approved in advance by the Executive Officer of this Board, the amount of oil field waste material to be deposited and used at such site is reasonable, and adequate use practices for and control of oil field waste materials on such site are assured:

   (a) Clean, fresh-water drilling mud removed from the drilling of an oil well prior to the time that the first production string of casing is installed.

   (b) Clean oil, not mixed with contaminants such as salt brines or toxic materials.

3. The Executive Officer may, upon written request, approve a site for a specified use or uses of those oil field waste materials specified in Paragraph 2 above, when the Executive Officer is reasonably assured that use of such site in the manner and for the purpose proposed will not adversely affect water quality or lead to nuisance conditions. Requests for site approval shall contain such information as may be required by the Executive Officer, and at a minimum shall contain:

   (a) A description of the site at which deposit and use of oil field waste materials will be made, and assurance that such materials will be used solely at and retained on such site.

(b) A description of the type of oil field waste material which will be used, the purpose or purposes for which it will be used, and the maximum quantity or quantities which will be used.

(c) Assurance that the applicant or a competent agent, will be present at the time of each delivery of oil field waste material.

(d) A proposed plan of use, specifically including cultivation practices and/or other appropriate control uses and measures, which will be taken to protect water quality and prevent nuisance.

(e) Certification that the proposed use or uses of oil field waste materials comply with all city, county, or other local use and zoning requirements and that all necessary use permits will be obtained and maintained.

(f) Certification that the applicant will submit such monitoring and technical reports as may be required by the Executive Officer.

(g) Certification that the applicant is the owner of the site at which deposit and use of oil field waste materials will be made, or written consent of the owner of such site to the proposed use.

4. In the event that the Executive Officer determines that there is reasonable assurance that the use of oil field waste materials at the site proposed and in the manner proposed will not adversely affect water quality or lead to nuisance conditions, the Executive Officer may, in writing, approve such site. The approval shall be contingent upon full and exact compliance with all statements, representations and assurances contained in the request, and shall further provide that:

(a) Site approval may be withdrawn at any time, in the discretion of the Executive Officer, upon a determination that further use of the site for deposit or use of oil field waste materials will or may adversely affect water quality or create nuisance conditions.

(b) Site approval does not relieve the landowner, or any other person, from otherwise complying with all state and local laws, rules, regulations and ordinances, and specifically does not constitute a license for use of oil field waste materials except in strict accord with the request and approval.

5. The Executive Officer shall remove site approval in the event of violation of any of the statements, representations, and assurances contained in the request.

I, Kenneth R. Jones, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of a resolution adopted by the California Regional Water Quality Control Board, Central Coast Region, on December 14, 1973.

Kenneth R. Jones

Executive Officer

APPENDIX A-17

Policy Amending "Policy Regarding Beneficial Use of Oil Field Waste Materials in the Santa Maria Oil Fields, Santa Barbara County" to apply Region Wide

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

RESOLUTION NO. 89-04

ADOPTING AMENDMENTS TO THE WATER QUALITY CONTROL PLAN AND REQUESTING APPROVAL FROM THE STATE WATER RESOURCES CONTROL BOARD

WHEREAS:

1. The Water Quality Control Plan, Central Coastal Basin (Basin Plan) was approved by the State Water Resources Control Board (State Board) on March 20, 1975.

2. Since March 20, 1975, thirty-seven Basin Plan amendments have been approved by the Regional Water Quality Control Board (Regional Board) and the State Board.

3. Since 1975, several changes in water quality regulations and administrative procedures have occurred.

4. An updated Basin Plan incorporating all previously approved amendments, updated regulations, and procedures is needed.

5. Several significant new Basin Plan amendments are needed:

   a. Revise PCB and Phthalate Ester objective for all Inland Surface Waters, Enclosed Bays, and Estuaries in the Water Quality Objectives chapter.

   b. Update "Municipal Wastewater Management Plans" in the Implementation Plan chapter.

   c. Update "Solid Waste Management" in the Implementation Plan chapter.

   d. Add "Water Quality Limited Segments" designation in the Plans and Policies chapter.

   e. Add general toxic or hazardous materials discharge prohibition to all waters in the Plans and Policies chapter.

   f. Amend Resolution 73-05, "Adopting Policy Regarding Beneficial Use of Oil Field Waste Materials in the Santa Maria Valley Oil Fields, Santa Barbara County" to apply Regionwide.

   g. Add Regional Board policy for Highway Grooving Residues in the Plans and Policies chapter.

h. Add Regional Board Policy for Waiver of Regulation of Specific Types of Waste Dischargers in the Plans and Policies chapter.

i. Add Water Bodies Needing Intensive Surveillance in the Surveillance and Monitoring chapter.

6. Several additional changes (as described in Attachment "A") are necessary to update the 1975 Basin Plan.

7. Several minor wording changes are necessary to improve the readability of the Basin Plan.

8. Drafts of the proposed Basin Plan have been prepared and distributed to interested persons and agencies for review and comment.

9. Regional Board staff has followed appropriate procedures to satisfy the environmental documentation requirements of both the California Environmental Quality Act, under Public Resources Code Section 21080.5 (Functional Equivalent) and the Federal Clean Water Act of 1977 (PL 92-500 and PL 95-217). The Regional Board finds adoption of these objectives will not have a significant adverse effect on the environment.

10. Due notice of public hearing was given by advertising in newspapers of general circulation within the Region.

11. On September 8, 1989, and November 17, 1989, in the Salinas City Council Chamber Rotunda, 200 Lincoln Avenue, Salinas, California, and in the Embassy Suites-Edna Room, 333 Madonna Road, San Luis Obispo, California, respectively, after due public notice, the Regional Board received evidence and considered all factors concerning the proposed revisions and amendments to the Plan.

THEREFORE BE IT RESOLVED:

1. All amendments mentioned above and in Attachment "A," will not have a significant adverse impact on the environment and the Executive Officer of the Regional Board is hereby directed to file a Notice of Decision to this effect with the Secretary of the Resources Agency.

2. All amendments mentioned above and in Attachment "A' are adopted.

3. Any minor editorial changes to correct data or grammar and/or clarify meaning in the final copy which may not be included in Attachment "A", are also adopted.

4. Staff responses which propose specific Basin Plan changes provided in the Regional Water Quality Control Board letter dated October 12, 1989, are adopted.

5. The State Board is requested to approve the proposed updated Basin Plan with amendments in accordance with Sections 13245 and 13246 of the California Water Code.

6. Upon approval, the State Board is requested to transmit the updated Basin Plan to the U.S. Environmental Protection Agency for approval.

I, **WILLIAM R. LEONARD, Executive Officer**, do hereby certify the foregoing is a full, true, and correct copy of a resolution adopted by the California Regional Water Quality Control Board, Central Coastal Region, on November 17, 1989.

William R. Leonard
Executive Officer

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APPENDIX A-18

Recommendation to the State Water Resources Control Board Concerning the Designation of Terrace Point in Santa Cruz County as an Area of Special Biological Significance

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

RESOLUTION NO. 76-10

RECOMMENDATION TO THE STATE WATER RESOURCES CONTROL BOARD CONCERNING THE DESIGNATION OF TERRACE POINT IN SANTA CRUZ COUNTY AS AN AREA OF SPECIAL BIOLOGICAL SIGNIFICANCE

WHEREAS:

1. The State Water Resources Control Board has adopted a Water Quality Control Plan, Ocean Waters of California;

2. This plan established the concept of designating some ocean waters as Areas of Special Biological Significance to afford special protection for marine life to the extent that waste discharge requirements or other procedures will not insure;

3. Such areas are to be designated by the State Water Resources Control Board after public hearings by the Regional Board and review of the Regional Board's recommendation;

4. Testimony was received by the Central Coast Regional Board concerning the Terrace Point area of Santa Cruz County as an Area of Special Biological Significance at hearings on February 9, 1973 and March 9, 1973;

5. The Regional Board did not include Terrace Point in its list of areas recommended to the State Board for consideration because of insufficient evidence;

6. The State Water Resources Control Board received further testimony regarding Terrace Point as an Area of Special Biological Significance at its hearing on March 21, 1974, but remanded it to the Regional Board for further hearing and recommendation;

7. After due notice, including publication in the Santa Cruz Sentinel, a third hearing was held by the Regional Board on November 19, 1976, pertaining to the designation of Terrace Point as an Area of Special Biological Significance;

8. Testimony for and against designating Terrace Point as an Area of Special Biological Significance was received at that hearing;

9. After considering all testimony received, the hearing panel did agree upon a recommendation to be submitted to the Regional Board.

10. At its regular meeting on December 10, 1976, the Board did receive the recommendation of the hearing panel and did review the record of the hearings concerning this matter;

11. The Board finds that adequate protection of water quality and beneficial uses can be provided through waste discharge requirements, permits, and aforementioned

activities, and that designation of the Terrace Point area as an Area of Special Biological Significance is not warranted;

NOW, THEREFORE, BE IT RESOLVED:

1. The California Regional Water Quality Control Board, Central Coast Region, recommends to the State Water Resources Control Board that Terrace Point not be considered for the designation of Area of Special Biological Significance; and, furthermore,

2. That copies of this resolution and the Board's staff report and copies of all other evidence presented, be transmitted to the State Water Resources Control Board.

I, KENNETH R. JONES, Executive Officer of the California Regional Water Quality Control Board, Central Coast Region, do hereby certify the foregoing is a full, true, and correct copy of a resolution adopted by the California Regional Water Quality Control Board, Central Coast Region, on December 10, 1976.

Executive Officer

APPENDIX A-19

Supporting Approval of the Clean Water and Water Conservation Bond Law of 1978

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

RESOLUTION NO. 78-04

SUPPORTING APPROVAL OF THE CLEAN
WATER AND WATER CONSERVATION BOND
LAW OF 1978

WHEREAS, the people of the State of California repeatedly have expressed their interest in ending water pollution in this State; and

WHEREAS, the Legislature passed the Porter-Cologne Water Quality Control Act which provides the authority and policy to require rapid compliance with high water quality standards: and

WHEREAS, the Board is determined to protect and enchance the quality of all waters of the State; and

WHEREAS, in order to carry out these objectives it is essential that new and improved facilities for the treatment, disposal and reclamation of sewage and other wastes be constructed at the earliest possible date: and

WHEREAS, the United States Congress has passed legislation which requires improved standards in water pollution control facilities, and provides Federal grants to assist in achieving such objectives; and

WHEREAS, in accelerating the needed waste treatment construction program of municipalities, inordinate financial burdens will be placed on the property taxpayers in a relatively short period of time unless the State assumes a share of the cost; and

WHEREAS, all of the citizens of the State benefit from improved water quality; and

WHEREAS, the drought of 1976 and 1977 demonstrated the need for conservation of freshwater and greater reuse of wastewater; and

WHEREAS, the Legislature has passed and the Governor has signed the Clean Water and Water Conservation Bond Law of 1978, which will provide needed financial aid to local governments; and

WHEREAS, this law will be considered by the voters of the State as Proposition 2 on June 6, 1978; and

WHEREAS, some public agencies will be unable to construct necessary wastewater treatment, disposal and/or reclamation systems without State assistance; and

WHEREAS, discontinuance of State assistance will cause delays in the construction of some necessary treatment works, reclamation systems, and water conservation projects: and

WHEREAS, the California Regional Water Quality Control Board, Central Coast Region, is the State agency with primary responsibility for the coordination and control of water quality in the Region;

NOW, THEREFORE, BE IT RESOLVED, that the California Regional Water Quality Control Board, Central Coast Region, expresses its support for Proposition 2 and urges every California voter to vote "yes" so that pollution control and environmental enhancement activities of local agencies can be continued.

I, KENNETH R. JONES, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, Central Coast Region on April 14, 1978.

Executive Officer

APPENDIX A-20

Regarding Marina County Water District's Petition to Delete the Southern Monterey Bay Discharge Prohibition Zones from the Basin Plan

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

RESOLUTION NO. 79-06

Resolution Regarding Marina County Water District's
Petition to Delete the Southern Monterey Bay Discharge
Prohibition Zone from the Basin Plan

WHEREAS, The California Regional Water Quality Control Board, Central Coast Region, (hereafter Regional Board), adopted the Water Quality Control Plan for the Central Coastal Basin (hereafter Basin Plan) on March 25, 1975, pursuant to Section 13240, et. seq. of the California Water Code and,

WHEREAS, The Basin Plan was reviewed and approved by the California State Water Resources Control Board and the United States Environmental Protection Agency; and,

WHEREAS, The Basin Plan prohibits waste discharges to the southern extreme of Monterey Bay, inshore from an imaginary line extending from Point Pinos (36°-38.3' N., 121°-56.0' W.) to the mouth of the Salinas River (36°-44.9' N., 121°-48.3' W.), effective July 1, 1983, and

WHEREAS, the Marina County Water District discharges treated wastewater to the southern Monterey Bay prohibition zone, and

WHEREAS, in April, 1979, Marina County Water District challenged the southern Monterey Bay prohibition zone, as contained in the Basin Plan, and waste discharge requirements and enforcement orders based on this prohibition, and

WHEREAS, during a public hearing on June 18, 1979, the Regional Board received testimony and reconsidered factors which prompted prohibition zone establishment, including:

1. Weak ocean currents and sluggish circulation
2. High ammonia concentrations and nutrient build-up
3. Adverse affects on designated Areas of Biological Significance
4. History of beach contamination
5. Importance of water-contact recreation and marine habitat
6. Projected wastewater flow increases
7. Political, social, and economic concerns, and

NOW, THEREFORE, be it resolved, that the Regional Board finds the following:

1. The establishment of the southern Monterey Bay prohibition zone in the Basin Plan was appropriate, based on information available at that time.

2. Data available since Basin Plan adoption supports the southern Monterey Bay discharge prohibition.

3. Amendment of the Basin Plan with respect to the southern Monterey Bay discharge prohibition zone is unwarranted.

I, Kenneth R. Jones, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted by the California Regional Water Quality Control Board, Central Coast Region, on June 18, 1979.

Executive Officer

APPENDIX A-21

Certification of Santa Cruz County's Wastewater Management Program for the San Lorenzo River Watershed

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

RESOLUTION NO. 87-04

CERTIFICATION OF SANTA CRUZ COUNTY'S
WASTEWATER MANAGEMENT PROGRAM
FOR THE
SAN LORENZO RIVER WATERSHED

WHEREAS, Chapter 962 of the Statutes of 1986 states it is the intent of the Legislature to assist the San Lorenzo Valley Water District with its cash-flow problem by providing a loan; and,

WHEREAS, one condition of the state making the loan is "the County of Santa Cruz shall agree to undertake a program which will adequately ensure that the use of on-site waste water disposal systems will not pollute waters of the state;" and,

WHEREAS, the County of Santa Cruz developed a multifaceted wastewater management program for the San Lorenzo River Watershed; and,

WHEREAS, the County of Santa Cruz submitted the program to the Regional Board; and,

WHEREAS, the Regional Board has reviewed the program and the progress of its implementation through reports, including periodic presentations by county staff to the Board; and,

WHEREAS, prior to the state making a loan the Regional Board must certify the adequacy of the County's program; and,

WHEREAS, Resolution No. 339-87, "Concerning Continued Implementation of a Wastewater Management Program for the San Lorenzo River Watershed," adopted by the Santa Cruz County Board of Supervisors on May 12, 1987, assures continued implementation of that wastewater management plan; and,

WHEREAS, the wastewater management plan contains the elements necessary to ensure protection of the waters of the state.

THEREFORE BE IT RESOLVED: the Regional Water Quality Control Board, Central Coast Region, certifies Santa Cruz County's Wastewater Management Program for the San Lorenzo Valley is adequate to satisfy the condition for the loan authorized by Chapter 962 of the Statutes of 1986.

I, WILLIAM R. LEONARD, Executive Officer of the California Regional Water Quality Control Board, Central Coast Region, do hereby certify that the foregoing is a full, true, and correct copy of a resolution adopted by the California Regional Water Quality Control Board, Central Coast Region, on June 12, 1987.

William R. Leonard
Executive Officer

RCB:lh -- res 87-04

APPENDIX A-22

Policy Regarding Disposal of Highway Grooving Residues

POLICY REGARDING DISPOSAL OF HIGHWAY GROOVING RESIDUES

1. Each highway grooving residue site shall be approved by the Executive Officer prior to use.

2. Waste Discharge Requirements may be waived, provided the following conditions are met:

   a. Grooving residues are confined to the trenches without overflow.

   b. Trenches do not intercept ground water.

   c. Disposal activities do not occur during the rainy season (December through April).

APPENDIX A-23

Waiver of Regulations of Specific Types of Waste Dischargers

State of California
California Regional Water Quality Control Board
Central Coast Region

April 15, 1983

ITEM: 7

SUBJECT: Review of Staff Procedures Regarding Waiver of Regulation of Specific Types of Waste Discharges.

DISCUSSION: Water Code Section 13263 provides Regional Boards with authority to issue waste discharge requirements for any discharge, other than into a community sewer system, that could affect the quality of the waters of the State. However, Water Code Section 13269 allows the Boards to waive regulation of a specific discharge or specific types of discharges where such action is in the public interest. This paragraph in the code allows flexibility to the Regional Boards so regulatory resources can be directed toward potential problems rather than consumed through regulation of waste discharges that will have no affect on quality of the state's waters.

Historically, staff has made most decisions regarding which discharges to regulate. Those decisions were based upon the size, type, duration, location, and significance of each existing or proposed waste discharge as well as staff resources available. All waivers granted by staff have been conditional and could be terminated at any time. Types of discharges which have received waivers from regulation by staff have usually fallen into one of the categories listed in Appendix A of this agenda item.

A recent opinion from the State Board's Office of Chief Counsel states that only the Regional Board itself can waive regulation of any discharge. One method of complying with this opinion would be for staff to schedule every waste discharge for a hearing before the Regional Board. However, because of limited resources, both Board and staff time must be directed to the more significant water quality problems. There are hundreds of waste discharges in the Region which have little or no impact on water quality. Many discharges are regulated through development of Best Management Practices rather than waste discharge requirements. For scattered sources of relatively minor quantities of pollutants, this management by exception is a more cost-effective method of regulation.

In order to meet the terms of the legal opinion and still effectively use resources that are available, the Executive Officer proposes the following procedure:

A proposed discharge or an existing unregulated discharge, which can be categorized as one of the types of discharges shown on the list in Appendix A, will be evaluated by staff. Discharges without perceivable significant impacts on water quality or public health will receive a tentative waiver from staff. With some exceptions, these tentative waivers will be reported to the Board on its next available agenda. Regional Board will be requested to ratify the staff's preliminary decisions and thus the Board can grant waivers from direct regulation generally on a case-by-case basis. Exceptions to this procedure are those types of discharge marked by an asterisk. These discharges are too small, insignificant, or numerous to list on the Board's agenda; or they are discharges for which regulating authority has been delegated by the Regional Board. For example, Regional Board Resolution 82-09 establishes applicable criteria for individual on-site sewage disposal systems. When a valid memorandum of understanding exists between the Regional Board and the local agency, permitting authority is delegated to the local agency.

Those dischargers which (1) cannot be categorized as one of the types of discharges on the attached list, or (2) may have significant water quality impacts (e.g., due to low flow rate of receiving water, or unique location of discharge), or (3) where any questions or uncertainty concerning conditions or facts remain, will be required to submit a Report of Waste Discharge with appropriate filing fee, and proposed requirements will be brought to the Board for consideration under normal procedures. After evaluating the facts, the Board may in some cases still determine that a waiver of direct regulation is appropriate.

Where waste discharge requirements have been issued by the Regional Board and have not expired, a waiver of that regulation cannot be obtained without a decision by the Board following a hearing. Thus, the procedure described above cannot be used to modify any existing order of the Board during the life of the permit. When a permit expires, staff will follow the procedure outlined above. Past self-monitoring reports and inspection reports will be used in evaluating the need for permit renewal. If staff determines that a tentative waiver is appropriate, that recommended action will be subject to Board ratification.

ATTACHMENT: Appendix A

RECOMMENDATION: Unless the Regional Board objects, staff will operate as described above.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

TYPES AND NATURE OF WASTE DISCHARGES
WHICH WILL BE CONSIDERED
FOR WAIVER OF REGULATION

Type of Waste Discharge	Limitations
1. Air conditioner, cooling and elevated temperature waters	Discharged to storm drains, to land, or in small volumes which will not change temperature of receiving water more than one degree C.
2. Drilling muds	Discharged to sump with at least two feet of freeboard. Sump must be dried by evaporation or pumping. Drilling muds may remain in sump only if discharger demonstrates mud is non-toxic. Sump area shall be restored to preconstruction state within sixty (60) days of completion or abandonment of well. Clean, oil-free, freshwater drilling mud removed from the oil well drilling operation prior to the time the first production casing is installed.
3. Oilfield waste materials	Clean oil not mixed with contaminants such as salt brines or toxic materials, (Reference: Staff Guidelines) used for beneficial purposes such as dust control, weed control and mosquito abatement where oil cannot reach State waters.
4. Minor dredge operations	When operation is short-term and spoil is nontoxic, and discharged to land.
5. Group 3 solid wastes	Small-scale operations using good disposal and erosion control practices.
*6. Test pumpings of fresh water wells	When pollutants are neither present nor added.
7. Storm water runoff	Where no water quality problems are contemplated and no federal NPDES permit is required.
*8. Erosion from construction projects	Where Best Management Practice (BMP) plans have been formulated and implemented or the local entity has an approved program for implementing BMP's (Reference: Resolution No. 79-09).

9. Pesticide rinse waters from applicators	Where discharger complies with State Board's Pesticides Guidance Document, (January, 1982)
10. Confined animal wastes	Where discharger complies with the Basin Plan and no federal NPDES permit is required.
11. Minor stream channel alterations and suction dredging	Where regulated by Department of Fish and Game conditions.
12. Short-term sand and gravel operations	Operations where washwaters are confined to land.
13. Metals mining operations	Operations confined to land where toxic materials are not used in recovery operations.
*14. Swimming pool discharges	Where adequate dilution exists to offset chlorine toxicity or where beneficial uses will not be affected.
15. Food processing wastes spread on land	Small, seasonal, confined to land, and removed from populated areas.
16. Agricultural commodity wastes	Small, seasonal, confined to land, and removed from populated areas.
17. Industrial wastes utilized for soil amendments	Where industry certifies nontoxic and non-hazardous content and BMP for agricultural application used.
*18. Timber harvesting	Operating under approved Timber Harvest Plan.
19. Minor hydro projects	Operating under water rights permit from State Water Resources Control Board or Fish and Game conditions.
20. Irrigation return water	Where sediment meets Basin Plan turbidity objectives and discharge is not toxic fish or wildlife. (Exempted from NPDES permit as per consolidated regulations)
*21. Project where application for Water Quality Certification is required	Where project (normally minor construction) is not expected to have a significant water quality effect, and project complies with Fish and Game conditions.

22. Brine disposal	To ocean without toxic constituents or to impermeable ponds.
*23. Individual sewage disposal systems	Where project is required to meet standard criteria of county or city that is implementing Basin Plan requirements pursuant to MOU, or an individual project that complies with Basin Plan.
24. Treatment and disposal systems for sanitary waste from small community, institutional, commercial, industrial operations.	Small community systems (serving five or less residential units) or institutional, commercial, or industrial systems (less than 2500 gallons per or day) with subsurface disposal, regulated by local agency that is implementing the Basin Plan through MOU with Regional Board, or an individual project that complies with the Basin Plan.
25. Flow-thru seawater systems and aquacultural operations.	Where no water quality problems are anticipated and no federal NPDES permit is provided.
*26. Injection wells	Where waste is produce water (CDOG/SWRCB MOA)

*The Board will not be requested to ratify staff waivers for these discharge types.

APPENDIX A-24

Interpretation of Minimum Parcel Size Requirements for On-Site Sewage Systems

REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

1102-A Laurel Lane
San Luis Obispo, CA 93401

RESOLUTION NO. 91-04

INTERPRETATION OF BASIN PLAN'S MINIMUM PARCEL SIZE FOR ON-SITE SEWAGE SYSTEMS

The California Regional Water Quality Control Board, Central Coast Region (hereafter Regional Board), finds that:

WHEREAS:

1. The Water Quality Control Plan for the Central Coastal Region (Basin Plan) contains the following language: "For new land divisions, lot sizes less than one acre should not be permitted." The Basin Plan allows on-site sewage disposal systems for parcel sizes not less that one-half acre when conditions are particularly favorable.

2. The Basin Plan is not specific as to gross or net area when referring to parcel size.

3. When this Basin Plan criterion was adopted by the Board, lot sizes required for on-site disposal systems were calculated by including building area, landscape area, driveway area, pool area, disposal area (including expansion area), and drainage area. Lot size calculations did not include streets, curbs, sidewalks, commons, or green belts.

4. There are environmental benefits to cluster subdivisions where dwellings are clustered and open space areas dedicated so long as densities do not exceed safe soil loading rates.

5. Lot sizes may be safely reduced in very favorable soil areas with fast percolation rates and minimal slopes. Staff calculations show percolation rates less than five minutes per inch and slopes less than five degrees can be suitable for on-site sewage disposal systems under very favorable conditions.

NOW, THEREFORE BE IT RESOLVED:

1. For new land divisions, the Regional Water Quality Control Board considers all one acre and one-half acre parcels to be gross area (i.e., including streets, curbs, sidewalks, commons, or green belts.)

2. For new land divisions, the one-half acre area requirement may be reduced to 20,000 square feet net area under very favorable site conditions as certified by the County Environmental Health Officer. Such conditions include, but are not limited to, slope less than five percent and percolation rates faster than five minutes per inch. Approval of the 20,000 square feet net lot size must be obtained in writing from the Regional Board's Executive Officer after certification by the County's Environmental Health Officer.

I, WILLIAM R. LEONARD, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, Central Coast Region, on May 10, 1991.

Executive Officer

agc:parcel3.res
sm7

APPENDIX A-25

Appreciation for Discharger Compliance

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

81 Higuera Street, Suite 200
San Luis Obispo, CA 93401-5427

RESOLUTION NO. 93-04
APPRECIATION FOR DISCHARGER COMPLIANCE

WHEREAS, the California Regional Water Quality Control Board, Central Coast Region, regulates discharges to surface and ground waters in the region through implementation of increasingly complex laws and regulations; and

WHEREAS, the dischargers in the region have increasing responsibilities and costs due to greater complexity of environmental regulatory compliance; and

WHEREAS, in spite of these problems, the vast majority of regulated dischargers do an excellent job of protecting water quality and complying with regulations; and

WHEREAS, prevention of pollution is much more cost effective and protects resources more effectively than cleanup; and

WHEREAS, Cal/EPA has stated goals which include regulatory streamlining as well as building and maintaining the capability to achieve environmental protection, given fiscal constraints.

NOW, THEREFORE BE IT RESOLVED, the region's regulated dischargers are commended for their excellent overall compliance record and continued efforts to protect water quality and public health in the face of economic difficulties.

THEREFORE BE IT FURTHER RESOLVED, the Regional Board will continue its endeavor to achieve the Board's mission of water quality protection and improvement, at the most cost effective manner to society, via the following:

1. The Board will maintain a significant level of field surveillance with a primary goal of early detection of threats to water quality and needed corrective actions, in addition to verification of on-going compliance with requirements.
2. The Board will require dischargers to do what is necessary for water quality protection and regulatory compliance, without asking for more than what is needed to do the job. Where applicable, general permits or waivers of requirements will be used.
3. In situations where staff is asking for discharger actions that go beyond regulatory minima (e.g., areas of regulatory ambiguity relying more on professional judgement, or where resources require protection beyond bare regulatory minima) the Board's staff will provide justification for its requests.
4. Staff will request technical and monitoring reports to the extent that they are required by the situation and will ensure that the burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports.
5. Staff will try to consolidate requests and encourage dischargers to consolidate reports or cross reference reports to accomplish reporting in the most cost effective manner. Time schedules may be adjusted to accommodate this goal so long as water quality or public health protection are not compromised.

THEREFORE BE IT FURTHER RESOLVED, that the State Water Resources Control Board is asked to consider the above listed principles in its communications with the Regional Board and dischargers.

I, WILLIAM R. LEONARD, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, Central Coast Region, on May 14, 1993.

William R. Leonard
EXECUTIVE OFFICER

May 14, 1993

APPENDIX A-26

Support Material for Calculating Adjusted Sodium Absorption Ratio (SAR)

TABLES FOR CALCULATING pHc VALUES OF WATERS

pHc can be calculated, using the table below; pHc= $(pK_2'-pK_c')$ + p (Ca+Mg) + pAlk where $pK_2'-pK_c'$ is obtained from Ca+Mg+Na
p (Ca+Mg) " " " Ca+Mg
pAlk " " " CO_3+HCO_3

Tables for Calculation pHc

Conct. Ca+Mg+Na (me/l)	$pK_2'-pK_c'$	Conct. Ca+Mg (me/l)	p(Ca+Mg)	Conct. CO_3+HCO_3 (me/l)	pAlk
.5	2.11	.05	4.60	.05	4.30
.7	2.12	.10	4.30	.10	4.00
.9	2.13	.15	4.12	.15	3.82
1.2	2.14	.2	4.00	.20	3.70
1.6	2.15	.25	3.90	.25	3.60
1.9	2.16	.32	3.80	.31	3.51
2.4	2.17	.39	3.70	.40	3.40
2.8	2.18	.50	3.60	.50	3.30
3.3	2.19	.63	3.50	.63	3.20
3.9	2.20	.79	3.40	.79	3.10
4.5	2.21	1.00	3.30	1.00	3.00
5.1	2.22	1.25	3.20	1.25	2.90
5.8	2.23	1.58	3.10	1.57	2.80
6.6	2.24	1.98	3.00	1.98	2.70
7.4	2.25	2.49	2.90	2.49	2.60
8.3	2.26	3.14	2.80	3.13	2.50
9.2	2.27	3.90	2.70	4.0	2.40
11	2.28	4.97	2.60	5.0	2.30
13	2.30	6.30	2.50	6.3	2.20
15	2.32	7.90	2.40	7.9	2.10
18	2.34	10.00	2.30	9.9	2.00
22	2.36	12.50	2.20	12.5	1.90
25	2.38	15.80	2.10	15.7	1.80
29	2.40	19.80	2.00	19.8	1.70
34	2.42				
39	2.44				
45	2.46				
51	2.48				
59	2.50				
67	2.52				
76	2.54				

Example: To calculate adj.SAR of water from

$$\text{adj.SAR} = \frac{Na}{\sqrt{\frac{Ca+Mg}{2}}}\left[1+(8.4-pHc)\right]$$

With report of water analysis
Na = 3.5 me/l
Ca+Mg = 1.0 me/l
Ca+Mg+Na = 4.5 me/l
CO_3+HCO_3 = 3.0 me/l

pHc= 2.21+3.30+2.5= 8.01 (from tables)

$$\text{adj.SAR} = \frac{3.5}{\sqrt{1/2}}\left[1+(8.4-8.01)\right] = 4.95\ (1+.39)$$

adj.SAR= 6.88

NOTE: Values of pHc above 8.4 indicate tendency to dissolve lime from soil through which the water moves; values below 8.4 indicate tendency to precipitate lime from waters applied.

(ref: L.V. Wilcox, U.S. Salinity Laboratory, mimeo Dec. 30, 1966)

APPENDIX A-27

Nipomo Individual Sewage Disposal System Prohibition Area Description

NIPOMO INDIVIDUAL SEWAGE DISPOSAL SYSTEM PROHIBITION #1A

BEGINNING at the point of the southernmost property corner of Assessor's Parcel Number (APN) 92-331-8 near the intersection of Southland Street and Orchard Road; thence north-easterly along the northerly boundary line at Southland Street to intersect the easterly boundary line of U.S. Highway 101; thence northwesterly along said line to the westernmost property corner of APN 92-301-12; thence along a bearing approximately N 48° 15' to intersect the easterly boundary line of Oakglen Avenue; thence northwesterly along said line to the southerly boundary line of Division Street; thence along an extension of said line to the easterly boundary line of Thompson Avenue; thence northwesterly along said line to the south property corner of APN 90-081-10; thence northeasterly along southeastern boundary of said parcel to the east property corner; thence northwesterly along an extension of the westerly boundary line of Cedar Street to the northerly boundary line of Tefft Street; thence northeasterly along said line to the easternmost property corner of APN 90-371-58; thence northwesterly along an extension of the boundary of said parcel to the southerly boundary line of Chestnut Street; thence southwesterly along said line to the westerly boundary line of Thompson Avenue; thence northwesterly along said line to the easternmost property corner of APN 90-151-13; thence along a bearing approximately S 48° W to intersect the easterly boundary line of Willow Road; thence southeasterly along said line to the southerly boundary line of Juniper Street; thence northeasterly along said line to the westernmost property corner of APN 92-131-06; thence along a bearing S 34° 30'E to the southerly boundary line of Tefft Street; thence southwesterly along said line to the west corner of APN 92-132-34; thence along a bearing of S 34° 30'E to the southerly boundary line of Hill Street; thence northeasterly along said line to the west corner of APN 92-133-26; thence along a bearing of S 34° 30'E to intersect the northerly boundary line of Division Street; thence southwesterly along said line to the easternmost property corner of APN 92-172-02; thence along a bearing approximately N 67° 28'W to the northernmost property corner of APN 92-454-20; thence along a bearing approximately S 22° 26'W to the westernmost property corner of APN 9-111-25; along a bearing approximately S 67° 28'E to intersect the easterly boundary line of Division Street; thence northeasterly along said line to the westernmost property corner of APN 92-181-13; thence along a bearing approximately S 64° 33'E to the southernmost property corner of APN 92-181-13; thence along a bearing approximately N 37° 30'E to the easterly boundary line of Orchard Road; thence southeasterly along said line to the true POINT OF BEGINNING.

APPENDIX A-28

San Lorenzo Valley Class I Area

SAN LORENZO VALLEY CLASS I AREA

Ben Lomond Book 77, Pages*
04, (Block 1, Lots 15, 16, 17, 20, 21, 27, 28, 29, 30, 31, 36, 37, 40, 41, 42, 47, 48, 50, 51, 52), 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 24 (Block 1 only), 25, 26, 27, 28.

Book 78, Pages* 162-03

Boulder Creek Book 81, Pages*
06, 07, 08, 09, 11, 12, 13, 14, 15 (all Block 1 and Block 2, Lots 1, 2, 3, 4, 8, 9, 11, 12), 16, 17, 20, 21, 22, 25, 26, 27, 28, 29.

Book 82, Pages*
20, 21, 22, 23, 27, (Block 1, Lot 12 only)

Book 89, Pages*
16 (Block 3, Lot 1 and Block 5, Lots 3, 4, 5), 17 (Block 1, Lots 4, 5), 18.

Book 90, Pages*
01, 02, 11 (Block 1, Lots 17, 19, 21, 22, 23, 24, 25)

Lower Kings/Wildwood
Book 83, Pages*
04, 07, 08, 11, 12, 13, 1, Lots 1, 2, 4, 5, 6, 18, 19 and Block 2)

Book 84, Pages*
01, 02, 03, 04, 05, 06, 07, 08, 09, 11

Book 85, Pages*
13, 14, 16, 17, 18, 19

Glen Arbor
Book 72, Pages*
07, 11, 14, 15, 17, 18, (Block 1, Lots 25, 26; Block 2, Lots 1, 2, 3)

Felton Book 65, Pages*
01, 02, 03, 04, 05, 06, 07, 08, 09, 11, 12, 13, 14, 15, 16, 17, 18, 21, 22

Book 71, Pages*
03 (Block 01, Lots 3, 13, 15, 16, 17, 18, 23, 24, 25, 26, 30, 38, 49, 50, 51, 62, 63, 64, 65), 04, 05, 06, 07, 15 (school district property only), 16, 17, 17, 18, 19, 25, 26, 29

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* Parcel numbers are indicated by complete pages, unless otherwise noted.

APPENDIX A-30

Los Osos Baywood Park Individual and Community Sewage Disposal System Prohibition Area

APPENDIX A-29

San Lorenzo Valley Class II Area

SAN LORENZO VALLEY CLASS II AREA

Forest Lakes Book 64, Pages*
5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 (Block 1, Lots 1, 2, 3), 17, 22, 29, 30 (All Block 1), 31, 32, 33, 34

Book 65, Pages*
19, 20, 23, 24, 25

Mount Hermon Book 66, Pages*
1, 2, 3

East Glen Arbor Book 72, Pages*
12, 18 (Block 1, Lots 1, 2, 8, 10, 11, 12, 13, 14, 18, 19, 20, 21, 23, 24, 27), 19, 24, 25, 27, 28, 29, 30, 35, 37

Brook Lomond Book 78, Pages*
6, 7, 8

Brookdale Book 79, Pages*
9, 10 (Block 1, Lots 6, 8, 9, 10, 12, 13, 14, 15, 18; Block 2, Lots 1, 2, 3, 4)

Forest Springs/Forest Park/ Brackenbrae Book 81, Pages*
2 (Block 1, Lots 1, 2, 3, 4, 5, 6, 7, 8, 12, 14, 15), 3 (Block 1, Lots 5, 6, 11, 12), 4, 5 (Block 1, Lots 1, 2)

Book 82, Pages*
1, 2 (Block 1, Lots 2, 3, 4, 5, 6, 10, 11, 12, 13, 15, 16, 17, 18, 19, 20, 21, 24, 26, 27, 28) 3, 4, 5, 7, 12, 31

Book 83, Pages*
16 (Block 1, lots 5, 7, 8, 13, 14, 15, 16, 18), 17 (Block 1, Lot 4), 18, 19, 20, 21, 22, 23

Riverside Grove Book 85, Pages*
2, 3, 4, 5, 6, 8

San Lorenzo Woods/Ramona Woods Book 87, Pages*
16, 18, 19, 20, 21

San Lorenzo Park Book 87, Pages*
7, 8, 9, 10, 11, 12

Zayante Book 74, Pages*
2, 3, 4, 5, 7, 9, 10, 12, 13, 14, 15, 16

Lompico Book 75, Pages*
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30

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* Parcel numbers are indicated by complete pages, unless otherwise noted.

WHEREAS, Los Osos Basin groundwaters are suitable for agricultural, municipal, domestic, and industrial water supply; and,

WHEREAS, a Regional Board staff report finds beneficial uses of Los Osos ground and surface waters are adversely affected by individual sewage disposal system discharges, there appears to be a trend of increasing degradation, and public health is jeopardized by occurrences of surfacing effluent; and,

WHEREAS, drafts of proposed revisions and amendments of the Basin Plan, prohibiting discharges from Los Osos/Baywood Park individual sewage disposal systems, have been prepared and provided to interested persons and agencies for review and comment; and,

WHEREAS, Regional Board staff has prepared documents and followed appropriate procedures to satisfy the environmental documentation requirements of both the California Environmental Quality Act, under Public Resources Code Section 21080.5 (Functional Equivalent), and the Federal Clean Water Act of 1977 (PL 92-500 and PL 95-217), and the Regional Board finds adoption of this prohibition area will not have a significant adverse effect on the environment; and,

WHEREAS, on September 16, 1983, in the San Luis Obispo City Council Chambers, 990 Palm Street, San Luis Obispo, California, after due notice, the Regional Board conducted a public hearing at which evidence was received pursuant to Section 13281 of the California Water Code concerning the impact of discharges from individual sewage disposal systems on water quality and public health; and,

WHEREAS, pursuant to Section 13280 of the California Water Code, the Regional Board finds that discharges of wastes from new and existing individual disposal systems which utilize subsurface disposal in the affected area will result in violation of water quality objectives; will impair beneficial uses of water; will cause pollution, nuisance, or contamination; and will unreasonably degrade the quality of waters of the State; and,

WHEREAS, the Regional Board finds the aforestated conditions in need of remedy to protect present and potential beneficial uses of water and to prevent pollution and nuisance.

NOW, THEREFORE, BE IT RESOLVED, that the Water Quality Control Plan, Central Coastal Basin, be amended as follows:

Page 5-66, after Item 7, following the legal description for Pasatiempo Pines (added by Resolution 83-09), insert the following prohibitions:

"8. Discharges of waste from individual and community sewage disposal systems are prohibited effective November 1, 1988, in the Los Osos/ Baywood Park area, and more particularly described as:

"Groundwater Prohibition Zone

(Legal description to be provided for area prescribed by Regional Board).

"Failure to comply with any of the compliance dates established by Resolution 83-13 will prompt a Regional Board hearing at the earliest possible date to consider adoption of an immediate prohibition of discharge from additional individual and community sewage disposal systems."

Discharges from individual or community systems within the prohibition area in excess of an additional 1150 housing units (or equivalent) are prohibited, commencing with the date of State Water Resources Control Board approval.

BE IT FURTHER RESOLVED, that the above area is consistent with the recommendations of the staff report as shown on "Attachment A."

BE IT FURTHER RESOLVED, that the Regional Board does intend standard exemption criteria, first paragraph of Page 5-67 of the Basin Plan, to apply to this action.

BE IT FURTHER RESOLVED, that compliance with the above prohibition of existing individual or community sewage disposal systems shall be achieved according to the following time schedule:

Task	Compliance Date
Begin Design	November 1, 1984
Complete Design	November 1, 1985
Obtain Construction Funding	December 1, 1985
Begin Construction	April 1, 1986
Complete Construction	November 1, 1988

BE IT FURTHER RESOLVED, that reports of compliance or noncompliance with schedules shall be submitted to the Regional Board within 14 days following each scheduled date unless otherwise specified, where noncompliance reports shall include a description of the reason, a description and schedule of tasks necessary to achieve compliance, and an estimated date for achieving full compliance.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

RESOLUTION NO. 83-13

Revision and Amendment of Water Quality Control Plan by the Addition of a Prohibition of Waste Discharge from Individual Sewage Disposal Systems Within the Los Osos/Baywood Park Area, San Luis Obispo County

WHEREAS, the California Regional Water Quality Control Board, Central Coast Region (hereafter Regional Board), adopted the Water Quality Control Plan for the Central Coastal Basin (hereafter Basin Plan) on March 14, 1975; and,

WHEREAS, the Regional Board, after notice and public hearing in accordance with Water Code Section 13244, periodically revises and amends the Basin Plan to ensure reasonable protection of beneficial uses of water and prevention of pollution and nuisance; and,

WHEREAS, in protecting and enhancing water quality, the Basin Plan specifies certain areas where the discharge of waste, or certain types of waste, is prohibited; and,

WHEREAS, Article 5, Chapter 4, Division 7, of the California Water Code defines criteria for such prohibition areas (Section 13240 et seq.); and,

WHEREAS, Los Osos/Baywood Park is an unincorporated community, with a 1980 population of 10,933 persons located south of the City of Morro Bay, in San Luis Obispo County; and,

WHEREAS, current zoning will accommodate a population in excess of 27,000 people and an average residential lot size of about 6600 ft^2; and,

WHEREAS, on-site soil absorption or evapotranspiration systems are the sole means of wastewater disposal in the Los Osos/Baywood Park area; and,

WHEREAS, the Los Osos/Baywood Park area soil permeability is rapid and there are substantial areas with high groundwater; and,

WHEREAS, the majority of lots are too small to provide adequate dispersion of individual sewage disposal system effluent; and,

WHEREAS, the San Luis Obispo County Environmental Health Department has provided documentation concerning the problem of liquid waste disposal in the Los Osos/Baywood Park area; and,

WHEREAS, the County of San Luis Obispo is preparing an environmental impact report (EIR) in accordance with the California Environmental Quality Act and a project report that identifies adverse environmental impacts from continued use of septic tanks in the Los Osos/Baywood Park area and discusses alternatives to existing wastewater management practices; and,

WHEREAS, "Los Osos-Baywood Park/Phase I Water Quality Management Study" cites conditions which constitute contamination and pollution as defined in Section 13050 of the California Water Code; and,

WHEREAS, chemical analyses of wells in Los Osos/Baywood Park indicates 38% of the shallow wells tested in the Phase I study, taking water from the Old Dune Sands deposits portion of the qauifer, contain nitrate concentrations which exceed State Health Department Drinking Water Standards of 45 milligrams per liter; and,

WHEREAS, bacterial analyses of 42 wells tested in the Phase I study resulted in 26 wells indicating total coliform in violation of State Health Drinking Water Standards, and 2 wells indicating fecal coliform in violation of Basin Plan limits for groundwater; and,

WHEREAS, surface water bacterial analyses tested in the Phase I study indicated total and fecal coliform levels exceeding Basin Plan recommended limits for water contact recreation (REC-1); and,

WHEREAS, a letter from the California Health and Welfare Agency, Department of Health Services, states their concerns regarding the high nitrate levels in the waters of Los Osos/Baywood Park area, and recommends adequate measures be taken to correct the nitrate problems to bring the waters into compliance with California Drinking Water Standards; and,

WHEREAS, a letter from the San Luis Obispo County Health Agency Director cites violation of the public health limit for nitrates and recommends elimination of shallow groundwater usage and adoption of a discharge prohibition; and,

WHEREAS, the Regional Board is obligated to include a program of implementation for achieving water quality objectives in its Basin Plan; and,

WHEREAS, present and anticipated future beneficial uses of Los Osos/Baywood Park creeks include recreation and aquatic habitat; and,

BE IT FURTHER RESOLVED, the County will continue a monitoring program, approved by the Regional Board staff, that will monitor ground water quality within the prohibition boundaries as set forth in this resolution, and also a monitoring program which covers areas outside the prohibition boundaries but within the urban reserve line as shown in Attachment A.

BE IT FURTHER RESOLVED, that the Regional Board has determined this action will not have a significant adverse impact on the environment and the Executive Officer of the Regional Board is hereby directed to file a Notice of Decision to this effect with the Secretary of the Resources Agency.

BE IT FURTHER RESOLVED, that the State Water Resources Control Board is hereby requested to amend forthwith the Clean Water Grant Project Priority List to recognize the necessary structural solution for Los Osos/Baywood Park as a Priority "A" project.

BE IT FURTHER RESOLVED, that if the Board holds a hearing and adopts an immediate prohibition as described above, the prohibition is effective as of the date the Regional Water Quality Control Board adopts a prohibition of discharge from additional individual and community sewage disposal systems.

BE IT FURTHER RESOLVED, the Executive Officer of the Regional Board is hereby directed to submit this revision of the Basin Plan to the State Water Resources Control Board for approval pursuant to Section 13245 of the California Water Code.

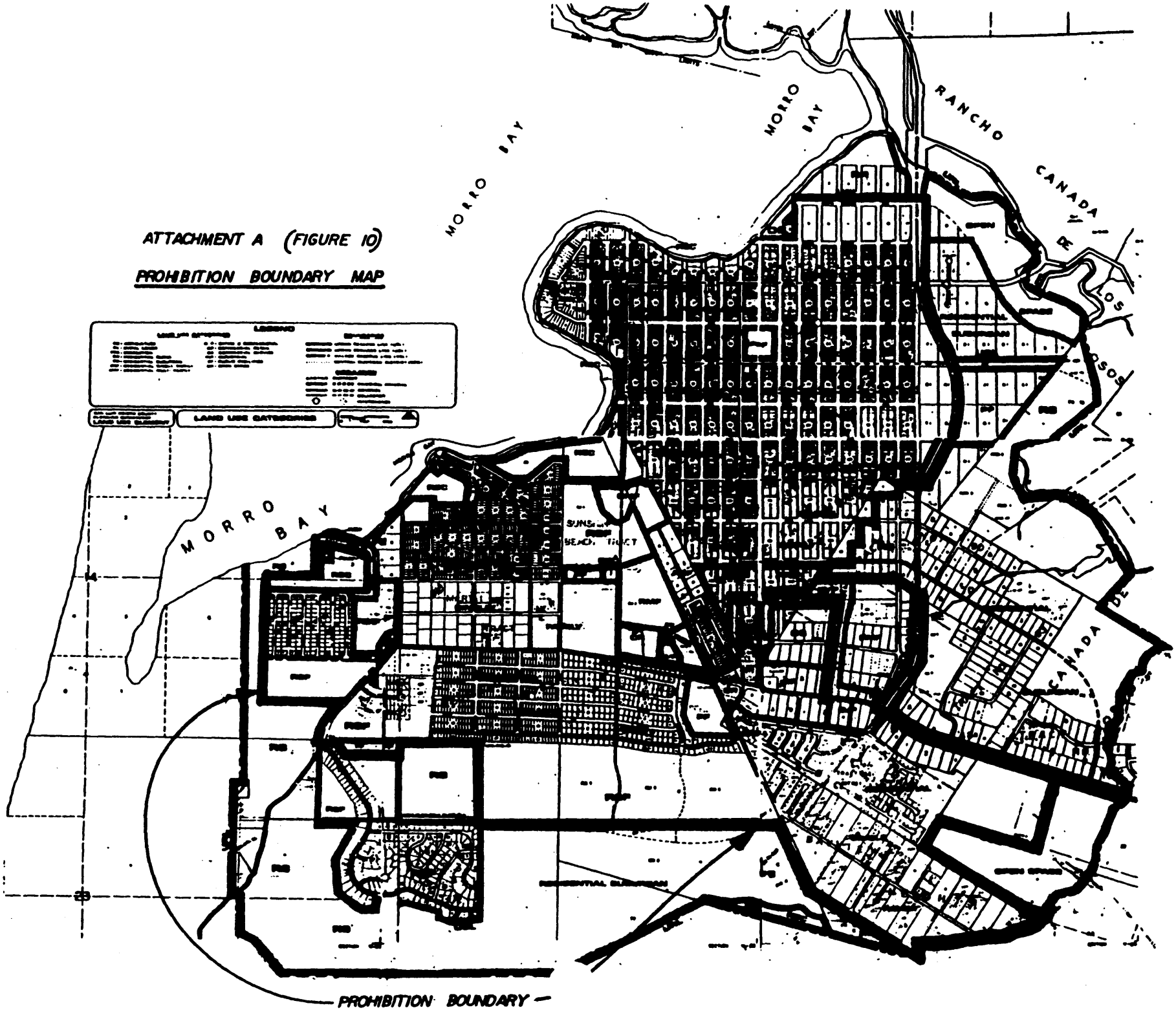
BE IT FURTHER RESOLVED, upon approval by the State Water Resources Control Board, Chapter 5 of the Water Quality Control Plan is revised by the addition of the above prohibition.

I, KENNETH R. JONES, Executive Officer of the California Regional Water Quality Control Board, Central Coast Region, do hereby certify the foregoing is a full, true, and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, Central Coast Region, on September 16, 1983.

Executive Officer

ATTACHMENT A (FIGURE 10)

PROHIBITION BOUNDARY MAP



APPENDIX A-31

Preliminary List of Potential Toxic Hot Spots

PRELI. ARY LIST OF POTENTIAL TOXIC HOT SPOTS REGION 3

Water Body	Segment	Known or Potential	Constituents	Supporting Information
Carmel Bay	Estuary and Bay	Potential	Silver, zinc, cadmium, in shellfish	SMW 1978-79, 1983-89, 1991 TSM 1988 Carmel Valley Wastewater Study, MPWMD, 1981 (at Cal Poly Library) Wastewater Monitoring Program, Carmel Sanitation District, 1981 Carmel WWTP NPDES monitoring
Santa Cruz Harbor	same	Potential	Cadmium and Copper	SMW 1980-81, 1989-90 Monterey County Bacteria monitoring, 1981-89 Santa Cruz WWTP NPDES monitoring
Santa Barbara Harbor	same	Potential	Mercury, zinc, copper in shellfish	SMW 1988-90 RWQCB Bacteria Study 1988 Santa Barbara WWTP NPDES monitoring RWQCB Bacteria Study 1992
San Luis Harbor	same	Potential	Possible metals and hydrocarbons from oil facilities	SMW 1983-91 Avila NPDES Permit monitoring (County Water District) Unocal Pipeline Investigation Reports (Dames & Moore), Avila Facility
San Luis Creek	Estuary	Potential	Bacteria, Sulfur, pesticides, fertilizers	SMW 1989-92 SLO Creek Restoration Plan, SLO County Land Conservancy, 1988 SLO Creek Water Quality Study, 1986 RWQCB Nutrient Study, 1983 DWR Water Quality Survey 1980 RWQCB Prop 65 Sampling, year? Invertebrate and Toxicity Testing, year? TSM 1989-90 San Luis Obispo WWTP Npdes monitoring
Monterey Bay	Monterey Harbor	Potential	Lead in shellfish and sediments Possible TBT in sediments	SMW 1978-89 RWQCB report 1988 IT Corp report 1990 (Southern Pacific Railroad lead cleanup) TSM 1987-90
Morro Bay	same	Potential	Possible pesticides, bacteria, metals, TBT	DHS report 1985 Morro Bay WWTP NPDES monitoring SMW 1978-90 RWQCB report 1986 PG&E Morro Bay NPDES monitoring

PRELIMINARY LIST OF POTENTIAL TOXIC HOT SPOTS REGION 3

Water Body	Segment	Known or Potential	Constituents	Supporting Information
Monterey Bay	Elkhorn Slough	Potential	Pesticides in shellfish	SMW 1979-89 PG&E Moss Landing NPDES Permit monitoring TSM 1988 DHS Shellfish Study, 1989 SWRCB/EPA Water Quality Study, 205j study, date ?
Monterey Bay	Moss Landing Harbor	Potential	Pesticides & bacteria in shellfish, TBT	SMW 1984, 1987-89 PG&E Moss Landing NPDES monitoring TSM 1988-90
Goleta Slough/ Estuary	same	Potential	Bacteria in shellfish & copper in water, Metals in sediments	Goleta Sanitary District NPDES monitoring SMW 1988-90 TSM 1988-89 RWQCB ag drain study 1988
Monterey Bay	Harkins Slough	Potential	Pesticides in fish and shellfish	SMW 1987-88 TSM 1985-86, 1988
Monterey Bay	Moro Cojo Slough	Potential	Pesticides in shellfish	SMW 1983, 1989
Monterey Bay	Tembladero Slough	Potential	Pesticides in fish	TSM 1983-84
Salinas River	Salinas River Lagoon	Potential	Pesticides in fish and shellfish	SMW 1984 TSM 1983 Biotic Assessment Salinas River Lagoon, Harvey and Stanley, 1988 Salinas River Lagoon Study, for MRWPCA by Ecomar, 1982 Lower Salinas River Ecological Study, Engineering Science, 1980 DHS Sanitary Eng. Investigation, Lower Salinas River, Rec. Canal, and Blanco Drain, 1971

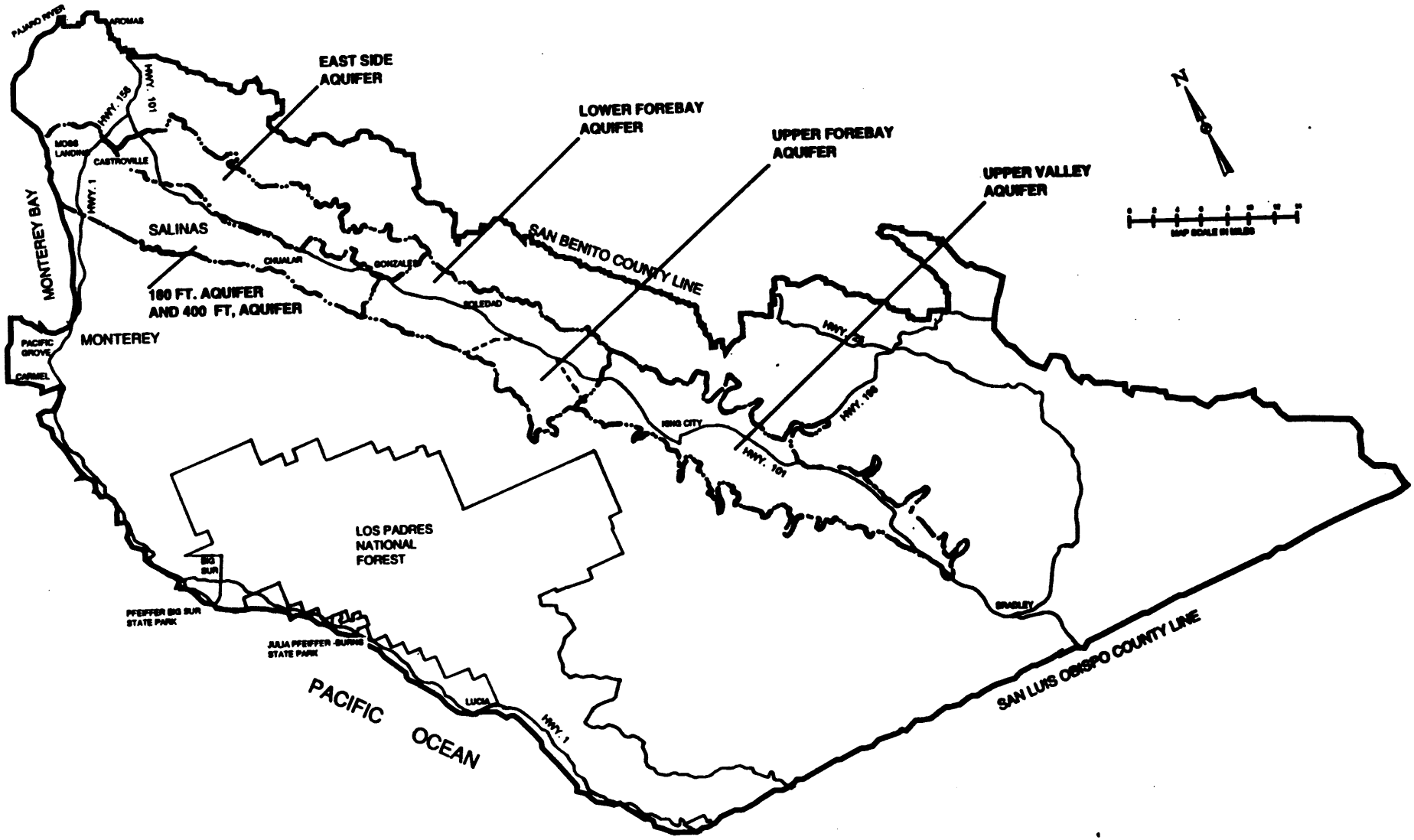
PRELIMI LIST OF
POT..TIAL
TOXIC HOT SPOTS
REGION 3

Water Body	Segment	Known or Potential	Constituents	Supporting Information
Monterey Bay	Espinosa Slough & Salinas Rec. Canal	Potential	Pesticides in fish and shellfish	SMW 1984-88 TSM 1984-88 DHS Sanitary Eng. Investigation, Lower Salinas River, Rec. Canal, and Blanco Drain, 1971 Abbot Street Properties NPDES monitoring Christian Salveson NPDES monitoring Shippers Development Co. NPDES monitoring
Salinas River	Old Salinas River Estuary	Potential	Pesticides in fish and shellfish	SMW 1984-85 TSM 1982-83 Biotic Assessment of Old Salinas River & Tembladero Slough, Harvey and Stanley, 1988
Monterey Bay	Watsonville Slough & Pajaro Slough	Potential	Pesticides in fish and shellfish	SMW 1983-84, 1986, 1988 TSM 1982, 1984-86, 1988

mt/THS.list/E

APPENDIX A-32

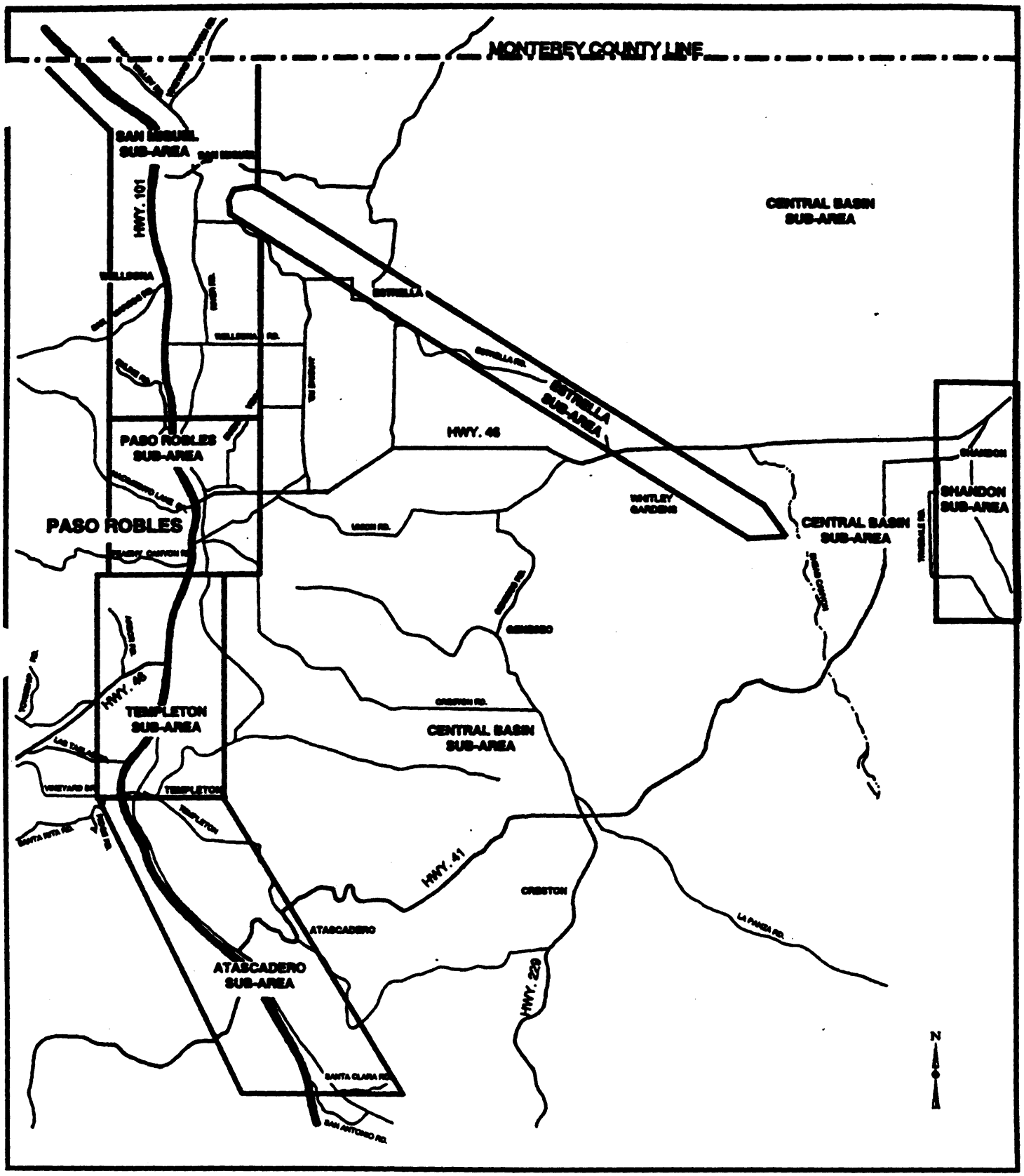
Salinas Ground Water Basin and Sub-Areas



SALINAS GROUND WATER SUB-AREAS

APPENDIX A-33

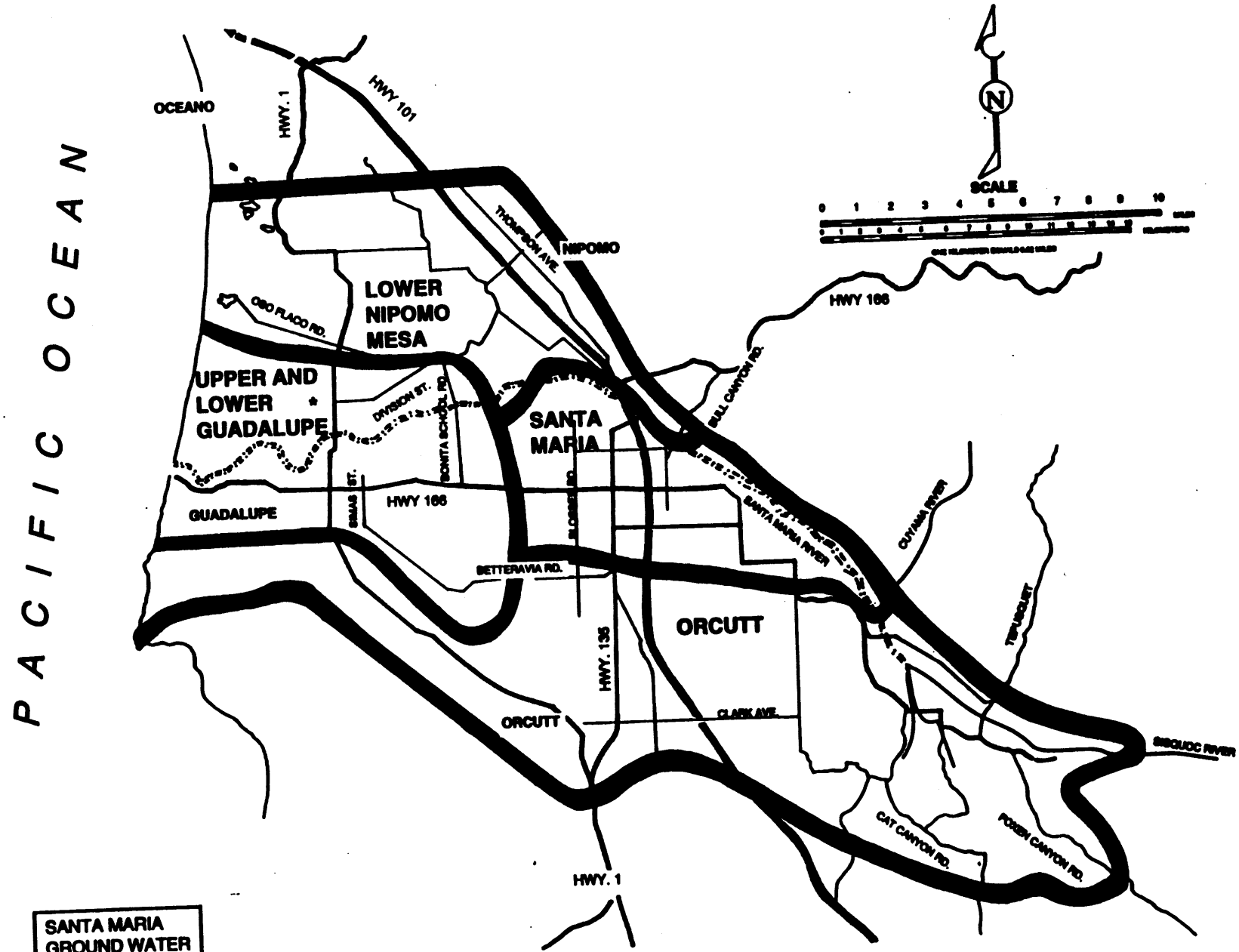
Paso Robles Ground Water Basin and Sub-Areas



PASO ROBLES
GROUND WATER BASIN AND
SUB-AREAS

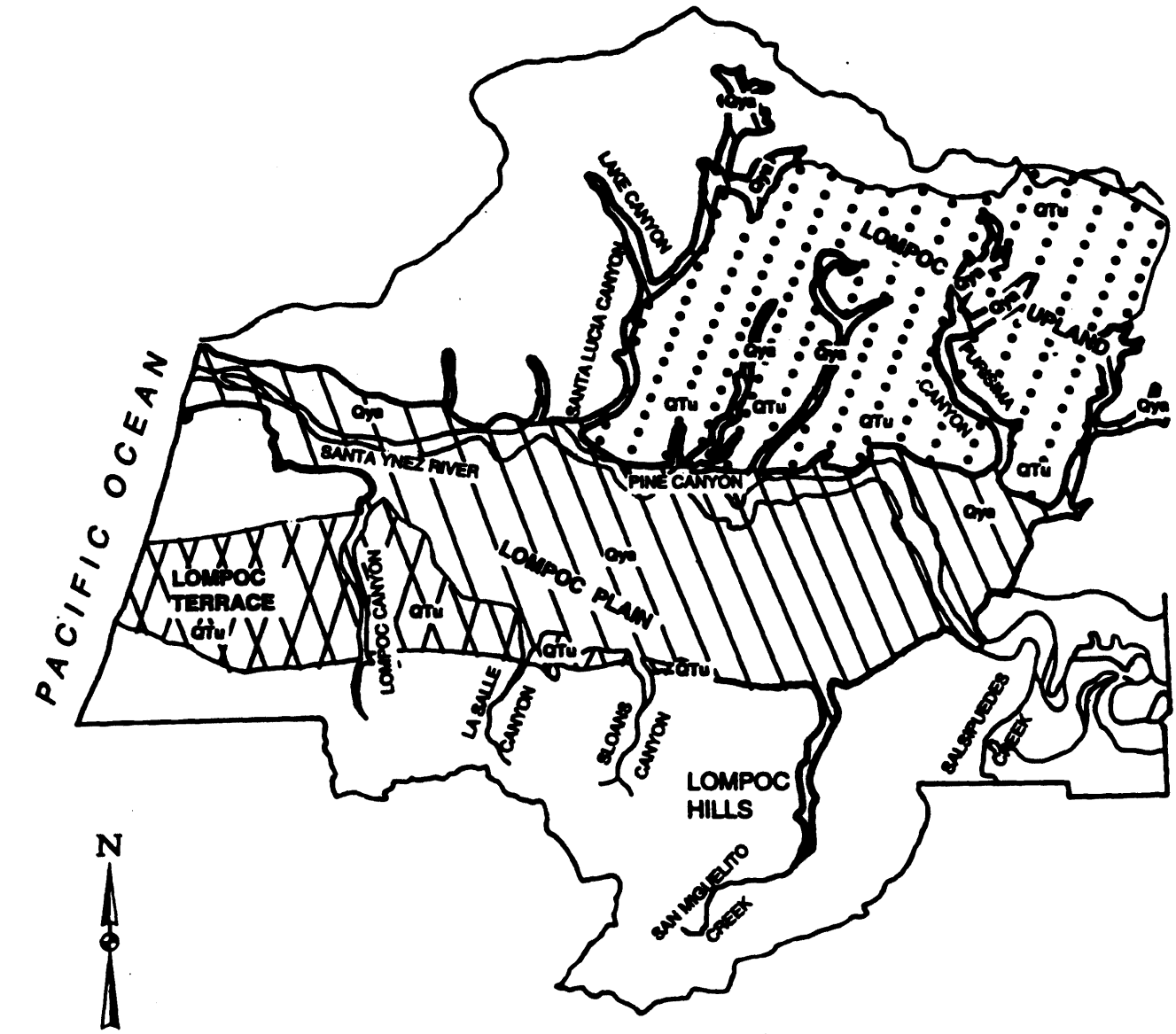
APPENDIX A-34

Santa Maria Ground Water Basin and Sub-Areas


PACIFIC OCEAN
OCEANO
HWY. 1
HWY 101
N
SCALE
0 1 2 3 4 5 6 7 8 9 10
THOMPSON AVE
NIPOMO
LOWER NIPOMO MESA
CPO PLACO RD.
HWY 166
UPPER AND LOWER GUADALUPE *
DIVISION ST.
BONITA SCHOOL RD.
SANTA MARIA
BULL CANYON RD.
GUADALUPE
BRAS ST.
HWY 166
FLORES RD.
SANTA MARIA RIVER
CUYAMA RIVER
BETTERAVIA RD.
ORCUTT
HWY. 135
TEPUSQUET
CLARK AVE.
ORCUTT
SISQUOC RIVER
CAT CANYON RD.
FOXEN CANYON RD.
HWY. 1
SANTA MARIA GROUND WATER SUB-AREAS
* (LOWER GUADALUPE IS 80 FEET BELOW GROUND SURFACE)

APPENDIX A-35

Lompoc Ground Water Basin and Sub-Areas



Qya— YOUNGER ALLUVIUM OF HOLOCENE AGE--Sand, gravel, silt, and some clay; beneath Lompoc plain upper member predominantly sand and silt; lower member predominantly gravel and sand.

QTu— TERRACE DEPOSITS, ORCUTT SAND, PASO ROBLES FORMATION, AND CAREAGE SAND OF PLIOCENE AGE--Sand, gravel, silt, and some clay.

LOMPOC TERRACE

LOMPOC PLAIN

LOMPOC UPLAND

CONSOLIDATED ROCKS OF TERTIARY AGE--Mostly sandstone, shale, diatomite, and mudstone of the Monterey, Sisquoc, and Foxen Formations.

LOMPOC
GROUND WATER
SUB-AREAS